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September 1959

Journal OF THE AMERICAN INSTITUTE OF ARCHITECTS

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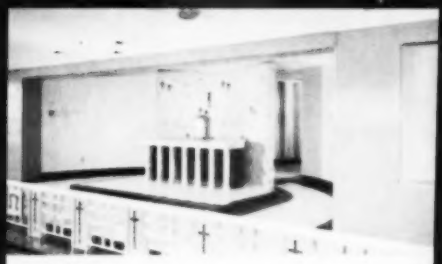

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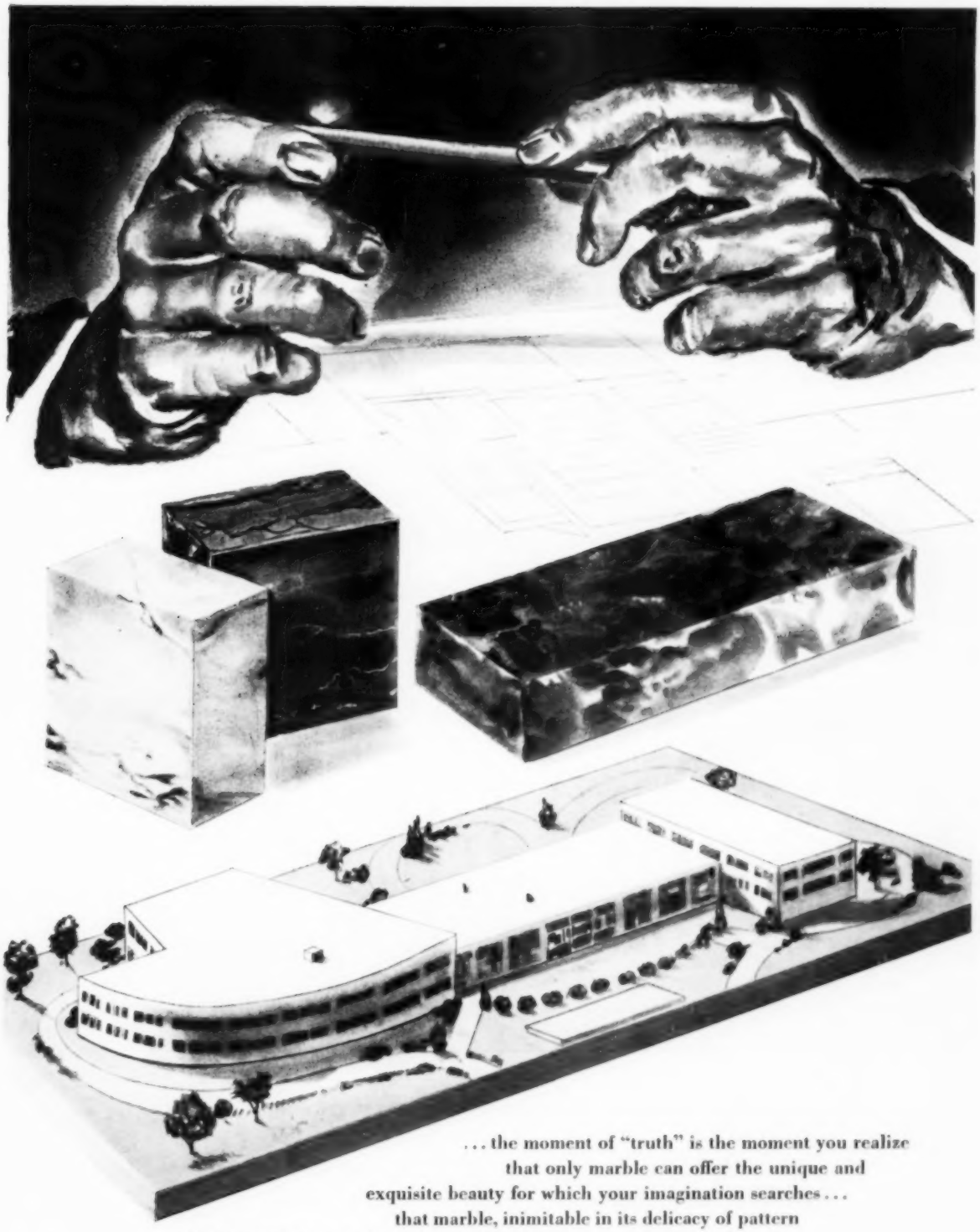

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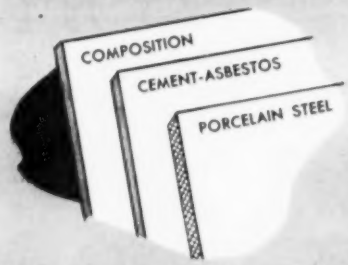

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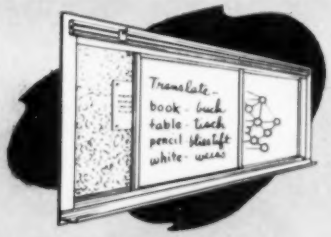

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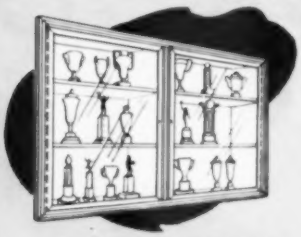

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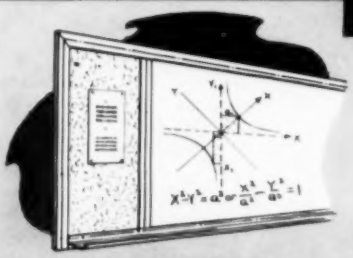

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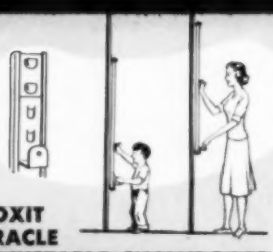

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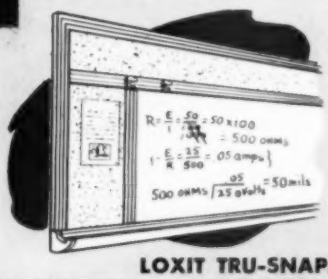

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THE COVER

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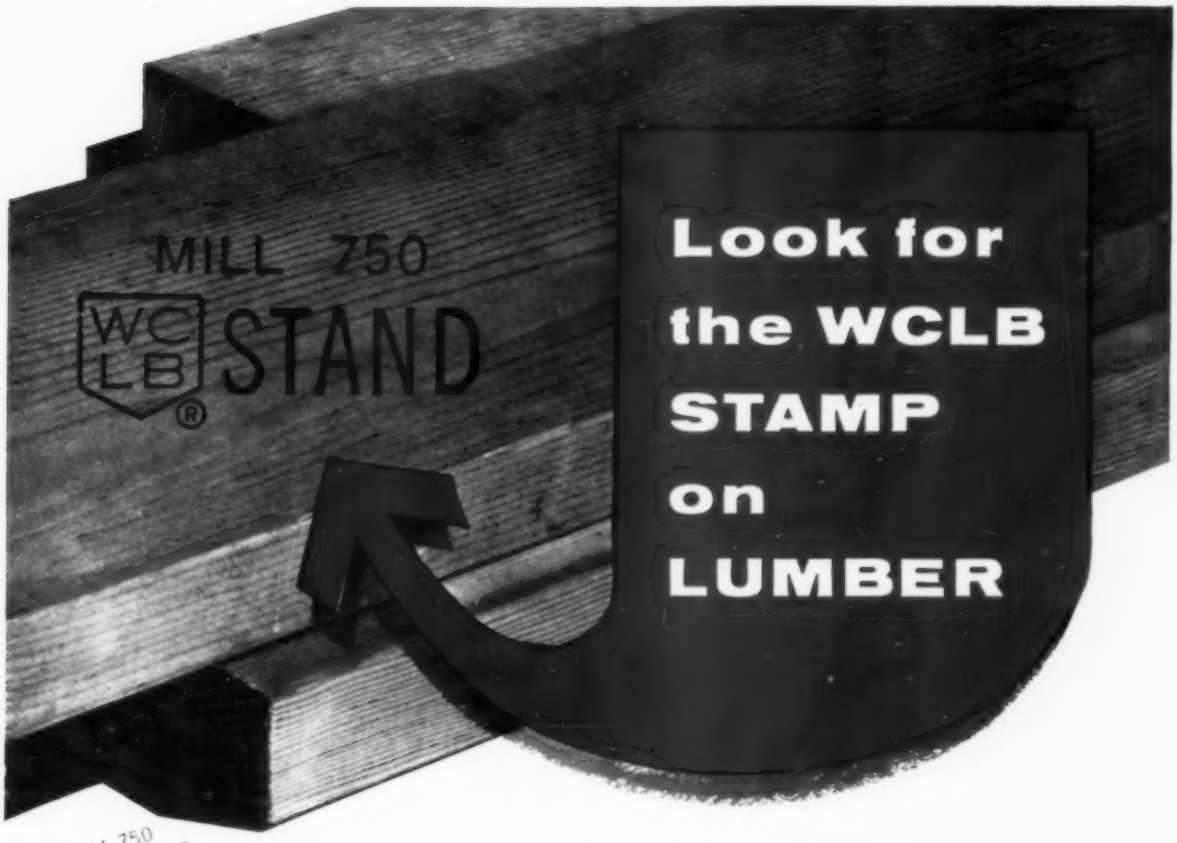

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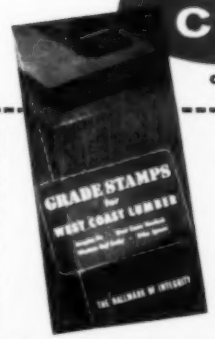

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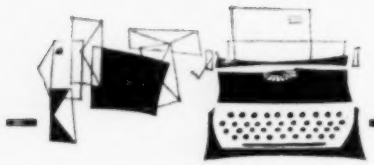

LETTERS

Bouquets to Mexican Architects

EDITOR, *Journal of the* AIA:

It seems to me to be fitting to make public acknowledgement of the warm and cordial reception by the Sociedad de Arquitectos Mexicanos of the members of the AIA who went to Mexico City following the New Orleans convention.

Mr Carlos Contreras accompanied us on the plane from New Orleans and was most helpful in expediting our passage through the Mexican customs. In passing, it might be observed that for his kindly, courtly and fatherly manner, Mr Contreras reminded this writer much of Charles D. Maginnis of beloved memory. On leaving the plane our group was surrounded by reporters and photographers from all the newspapers, and this was but the beginning of much more attention paid to us than this writer, at least, felt was deserved.

A public reception and cocktail party given by the Mexican architects at the Club de Golf Mexico, a beautiful country club far out from the city, was the highlight of our visit in its professional aspect. It was a remarkable experience to meet so many professional friends and their wives from south of the border, to find the language barrier almost non-existent (they were much better with English than we with Spanish) and to find common ground of interest in many directions, all against a background of social intermingling of the most cordial sort. A Mr Wright, counselor from the American Embassy, was there to represent the American Ambassador, and he formally presented us to the gathering.

In the evening of the same day another cocktail party on a smaller scale was arranged at the hotel where we were quartered.

Although I personally did not rate the attention and generous hospitality showered on us by our Mexican colleagues, and although it was received with pleasure and full appreciation, it seems that it must really be thought of as a symbol, a symbol of the close and friendly ties between two great architectural societies and in that spirit may I say "thank you" on behalf of The American Institute of Architects.

LLOYD M. HENDRICK, AIA
Buzzards Bay, Mass.

Bouquets

EDITOR, *Journal of the* AIA:

Just a brief note to express my enthusiasm for the appearance and graphic quality of the July issue of the *Journal*. You and Mr Von Eckardt, as art director, are both to be congratulated for what seems to be a meaningful collaboration of editorial effort.

JOHN JAMES CARLOS, AIA
Editor *Architectural and Engineering News*
New York, New York

Lincoln Memorial vs. Robert Ripley

EDITOR, *Journal of the* AIA:

In your "Asides" of Dec. 1958, referring to non-architect scribes ("Huge, Romanesque marble pillars!" which actually "were pure Greek Doric"), you are rightfully peeved at the glaring (to an architect) inaccuracy.

Along the same line as your finding, I had some correspondence with "Ripley's Believe It or Not" syndicated revelations. In May of this year there was a drawing of Bacon's Lincoln Memorial and a reference that *"the colonnade has 36 Ionic fluted columns."* I wrote to them calling attention to the flagrant (to me) error—referring to it as grossly misleading.

"The reference to Ionic columns was repeated from page 48, of Charles B. Reynolds, *Washington, a Practical Guide*." The Research Director went on to say that "While this (error) is regrettable, it is hardly a major inaccuracy, let alone a 'grossly misleading' statement."

I do not agree with him that the error in labeling the classic order is not "a major inaccuracy, let alone a 'grossly misleading' statement." If he were reminded that there is a great difference between the Greek and Roman Doric, he may have been really confounded. My real motive in calling attention to the error was to point out that people generally today are ignorant of traditional background.

F. RAY LEIMKUELER, AIA
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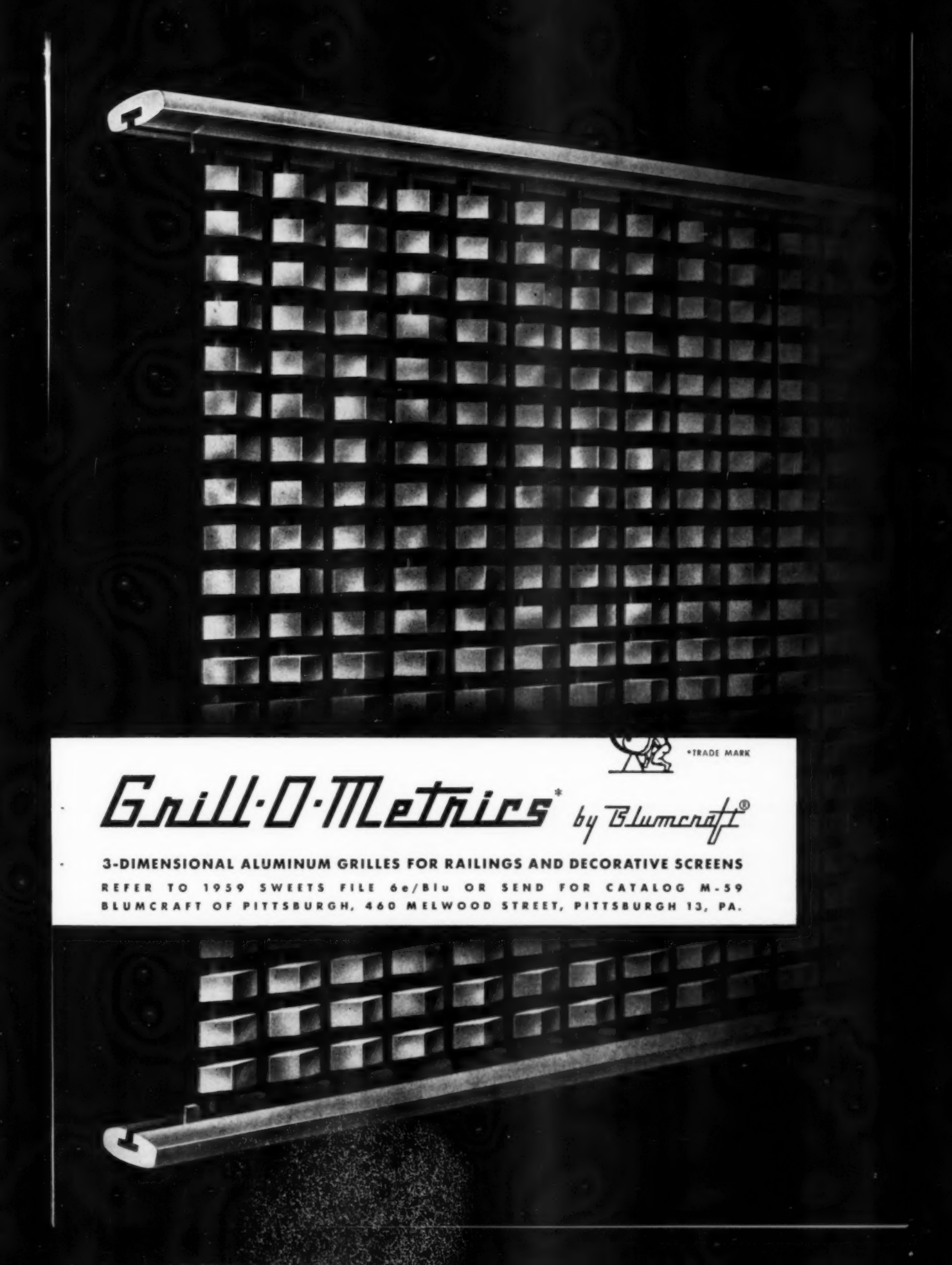
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Architecture Along the Straw Hat Trail

► There are actually very few straw hats in the crowds enjoying one of New England's finest vacation attractions—the ever-increasing number of summer theaters. Nor did I find any of the converted barns the cartoonists keep depicting. New England's summer culture does, however, flourish in some amazing places. They range all the way from Boston's brand new Arts Center Theatre to the quaintly delightful theater in the town hall of Monmouth, Maine. Only a few performances are actually given in the open and probably none in as lovely a spot as Wellesley's "Theater on the Green," where the remarkably talented "Group 20 Players" hold forth.

The Metropolitan Boston Arts Center is a colorful balloon and canvas affair dominating a superb site along the Charles River. It is as ingeniously engineered as it is improvised-looking and displays just about as much cultural grace as a farm machinery tent at a county fair.

The tiny hamlet of Monmouth, Maine, in contrast, has an honest-to-goodness theater. It is hidden away in a structure so monstrously Victorian that it is positively endearing and should by all means be closely watched by the National Trust and AIA Preservation Officers. This cream and white apparition from "A Thousand and One Nights," complete with minarets and other Turkish architectural delights, is known as Cumston Hall. It was designed, I learned, by one Harry Cochrane (b. 1860) among whose other claims to immortality is the composition of a cantata entitled "The First Crusade."

Deep in the labyrinthine entrails of this strange building, accessible only by a narrow, winding staircase, a delightful theater is hidden, complete with balcony, lavish boxes, rich pastel-colored *putti* and other baroque plaster ornaments. It's lovely and eminently fitting for the Gilbert and Sullivan Festival performed there.

The most successful modern summer playhouse I have seen also happens to be the first full-scale professional theater to be built in the United States in a quarter of a century—the American Shakespeare Festival Theatre at Stratford, Connecticut. Since a rose by any other name, etc., the choice of this most unattractive town is literally hard to stomach. You can't even get a decent breakfast there if you decide to stay for another evening's performance which is, after all, the festival idea.

The same sort of sentimentality led the sponsors to order an imitation of the old Globe Theatre in London. In my opinion, architect Edwin Howard, AIA, has, however, handled this difficult assignment superbly. There is little left of the Globe but the octagonal form and the covering of natural wood which mellows the building's stern shape and awesome scale. Inside it is, in the words of a sophisticated drama critic, "the most beautiful, comfortable playhouse . . . the perfect theater."

It's the Stratford-on-Housatonic stage, however, which deserves a pilgrimage by all who may be remotely connected with the design of a theater. As wide as the auditorium (96 ft.) and incredibly high (29½ ft.) this stage is immense, truly "all the world." Its back and sides are enclosed by countless slatted, silvery brown wood strips which can be raised and lowered separately like Venetian blinds in unending combinations. On and through these slats the stagelight can create every possible illusion. The raked stage floor extends as a platform beyond the proscenium, ending in a trap through which whole armies can most dramatically enter or disappear into the audience. All this is wood, the same wood as that used in the auditorium, which tends to bring play and audience further into unison to a point which I have never before experienced in any theater, "in the round" or otherwise. There is no curtain. None is needed because most ingenious machinery effects rapid and striking transformations in full view of the audience, sometimes while the actors have already begun a new scene.

In the hands of the American Shakespeare Festival's brilliant directors this stage is capable of a magic no Hollywood production will ever be able to match. Yet these boards, as Rouben Ter-Arutunian has designed them, have an honest simplicity far closer in spirit to the Elizabethian theater, as I imagine it, than all the architectural allusions to the old Globe.

Here is a theater at last that is as good as the acting and the production which are deservedly acclaimed. I'll go along with Lawrence Langner, the prime mover of the American Shakespeare Festival, who calls it "a triumph of our national pride." ◄

W. V. E.

Slats: A dress rehearsal of King John, *final scene*

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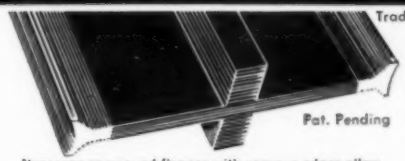

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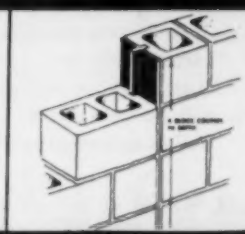

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NEWS

E.B.M., Sr. Addresses Washington Building Congress

► Edwin Bateman Morris, Sr., FAIA, Vice President of the Tile Manufacturers Association of America, and newly elected Fellow of the Institute, was a recent featured speaker at a meeting of the Washington Building Congress.

Mr. Morris is well known to Institute members and is one of the outstanding speakers on the banquet circuit. His topic was "A Look at 50 Years of Construction in Washington" and it is a certainty that the topic was reviewed with more *joie de vivre* at this meeting than in many a day.

Two interesting displays were set up for this meeting, one by the American Amplifier and Television Corporation showing the latest devices in hospital communications systems, the other by Don D. McAfee and Associates, a leading firm of Washington interior designers.

The Contract Division of McAfee and Associates arranged an ingenious display illustrating the ways in which the interior designer can assist the architect in both the early and late stages of planning business interiors.

A graphic display illustrating the ways in which the architect and the interior designer can cooperate in creating "total design."

In the early stages the designer can help the architect to determine the client's "corporate image" by examining his public relations programs, employee relations, inter-corporate prestige and status problems. In later stages of planning, knowledge of this "corporate image" will assist in determining the type of decor, brightness key and the proper arrangement of staff and executive areas. This cooperation between the architect and the interior designer will also pave the way to a smoother and better developed color plan, lighting program and a better organized budget.

Later in the planning stages the interior designer can assist in the selection of proper furniture with an eye toward appropriateness, wearability and design. Wall and window treatments in executive offices are most important in assuring the proper feeling. In many cases the employment of a competent interior designer can make or break the feeling of totality and completeness in a building.

The display illustrated the various ways which close teamwork between the architect and the interior designer could be of great value to the client, and how a coordination of all interior and exterior design considerations could create the finest total effect. ◄

The R. S. Reynolds Memorial Award

► The Institute has announced regulations for the Fourth Annual $25,000 R. S. Reynolds Memorial Award for significant use of aluminum in architecture.

This international award is conferred annually on an architect who has designed a significant work of architecture, in the creation of which aluminum has been an important factor.

Under the regulations, an architect may be nominated for the Reynolds Award by anyone—including himself or his firm. Nomination forms can be obtained from the Institute.

The Reynolds Award Jury selected by the Institute will give preference to works of architecture completed during the last three years. But the Jury may acknowledge earlier work.

In addition to the $25,000 honorary payment, the recipient also receives an appropriate sculptured piece especially created by a prominent contemporary artist.

Architects practicing in any nation are eligible. Membership in a professional society is not required. Programs giving details of the Award will be sent by the Institute to each member as well as to foreign architectural societies. ◄

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PRODUCERS COUNCIL

Foreign Study Scholarships in Related Fields

► American artists, sculptors, art historians and archaeologists will have an opportunity to study in 45 countries during 1960-61 under the International Educational Exchange Program of the Department of State.

Awards under the Fullbright Act which is operative in 27 countries are given for study in Europe, Latin-America and the Asia-Pacific area, and cover tuition, maintenance and travel to and from the country of choice. In those Latin-American countries where there are no opportunities under the Fullbright Program, grants are made under the government's Inter-American Cultural Convention program.

These awards will provide approximately 1,000 opportunities for Americans to study abroad in an unlimited number of fields.

General eligibility requirements are U.S. citizenship, a Bachelor's degree or the equivalent of four years of professional training, language ability sufficient to carry on the proposed study and good health. A demonstrated talent in the applicant's field is also necessary, and preference is given to applicants under 35 years of age.

Applicants will be asked for a statement of their reasons for desiring to study abroad and for a preliminary plan of their proposed study. Successful candidates will be affiliated with educational institutions that will help them plan their programs.

Persons interested in the scholarship awards should write to the Institute of International Education, 1 East 67th Street, New York 21, New York, for further information and application forms. Competitions for the 1960-61 academic year close November 1, 1959. Requests for applications must be postmarked before October 15, and the completed forms must be submitted by November. 1. ◄

President John Noble Richards, FAIA, *receives an Honorary Membership in the Royal Architectural Institute of Canada from Harland M. Steele, Vice Pres. of the R.A.I.C.*

NECROLOGY

According to notices received at The Octagon between July 11, 1959 and July 30, 1959

FAIRBANKS, CLIFFORD S. Rochester, N. Y.
FINKELSTEIN, HARRY, Brooklyn, N. Y.
HARRALL, H. D., Bennettsville, S. C.
KREMER, J. WALTER, Fairmont, W. Va.
LINDEBERG, HARRIE T., New York, N. Y.
MULLEN, HERBERT, Los Angeles, Calif.
NEILD, EDWARD F., JR., Shreveport, La.
STOUT, HOWARD A., SR., FAIA, Atlantic City, N. J.
VERNER, JULES, Seaside Park, N. J.
WILSON, CHARLES T., Ladue, Mo.

Neutra Receives German Award

► The President of West Germany recently honored Richard J. Neutra, FAIA, with the highest decoration his republic can bestow, the Great Cross of Merit. It was one of the last acts of President Heuss before his retirement from office. The President is himself a historian of modern architecture and esthetics, and has written a number of books on the subject.

Mr. Neutra received the award in the presence of the Mayor of Los Angeles and the Presidents and delegates of the two major California universities. ◄

Television Tribute to Architects

► Architects and their contribution to the American scene will be the subject of a special television tribute during the opening moments of the "Armstrong Circle Theater" presentation of October 14. The show will be seen on the CBS television network.

Citing the architect-designed buildings that are "changing the face of every city and town in our land," the salute will emphasize the role of the architect in every phase of building development.

The presentation will point out that the architect has the responsibility of selecting all the materials that go into his building, from floor to ceiling. The Armstrong Cork Company, sponsor of the program, will acknowledge the nation's debt to the architect for his leadership in creating better buildings.

"Armstrong Circle Theater" is seen by some 20 million viewers. It is in its tenth consecutive year, and is one of the longest-running "live" dramatic programs on television. ◄

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1. Tested by Underwriters' Laboratories. They are the only acoustical tile ceilings that have been tested and given time-design ratings by Underwriters' Laboratories, Inc. They have received both two-hour and four-hour ratings.

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3. Make additional protection unnecessary. They are the only tile ceilings that offer rated fire protection without the use of costly intermediate protection above and in addition to the suspended acoustical ceiling.

4. Save money. Up to 30¢ per square foot, depending upon locale, building design, type of fire protection being considered, and type of alternative tile considered.

5. Save materials. No need to pay for extra concrete, lath, plaster, spray-on fireproofing — or water.

6. Save weight. Acoustical Fire Guard makes it possible to specify, in some instances, lighter weight floor-ceiling assemblies. This can result in a saving in multi-story buildings.

7. Save on labor. One less building trade is needed. No extensive cleanup operations are necessary.

8. Save construction time. As much as three to four weeks. No waiting for wet work to dry. Building earns income sooner.

9. Save remodeling time. "Dry" construction can be done during or between building working hours. No "Closed for alterations." Less mess and inconvenience. Prefinished ceiling requires no painting.

10. You get a safer building. Even where time-design-rated construction is not required you can now have tested fire protection at very little extra cost.

11. Save money on insurance. Insurance rating organizations recognize a rated fire protecting material whether or not it is code required. With Acoustical Fire Guard ceilings you may earn considerable reductions in fire insurance rates. See your Armstrong representative for actual examples.

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A. Excellent sound absorption. NRC of .70 for both ⅝" and ¾" thicknesses.

B. Excellent resistance to sound transmission. Room-to-room attenuation factors (over ceiling-height partition) are 42 db for ⅝" Acoustical Fire Guard and 44 db for ¾" Acoustical Fire Guard. Acoustical Fire Guard ceilings are compatible with the *best* movable, ceiling-height partitions.

C. Resistance to "breathing." Acoustical Fire Guard ceilings stay clean because they retard the passage of dirt-laden air.

D. Convenient accessibility. New access clip-panel arrangement allows access to any part of the ceiling's plenum chamber.

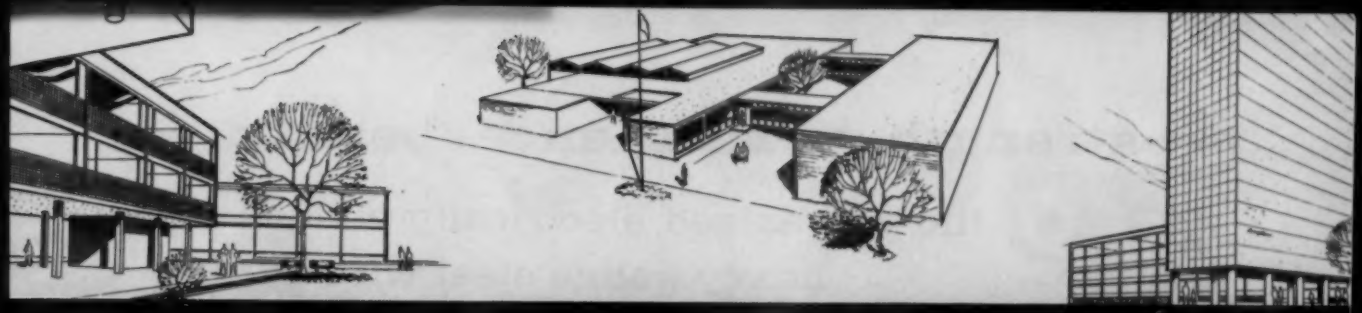
E. High light reflection. Acoustical Fire Guard's washable white surface has a light reflectance of "a" (over 75%).

F. Self-leveling T & G joint. Insures a level, better looking finished ceiling.

G. Three attractive designs. Fissured, Classic, and Full Random.

For complete information about new Armstrong Acoustical Fire Guard ceilings, consult your Armstrong Acoustical Contractor, your nearest Armstrong District Office, or write Armstrong Cork Company, 4209 Sage Street, Lancaster, Pennsylvania.

Armstrong ACOUSTICAL CEILINGS



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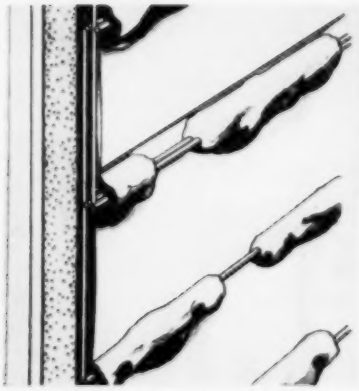

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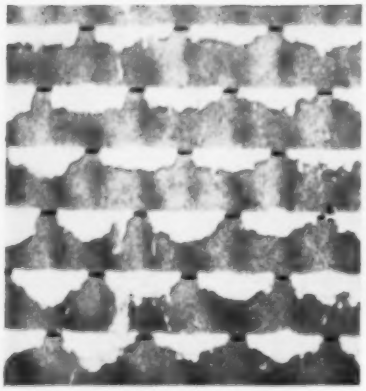

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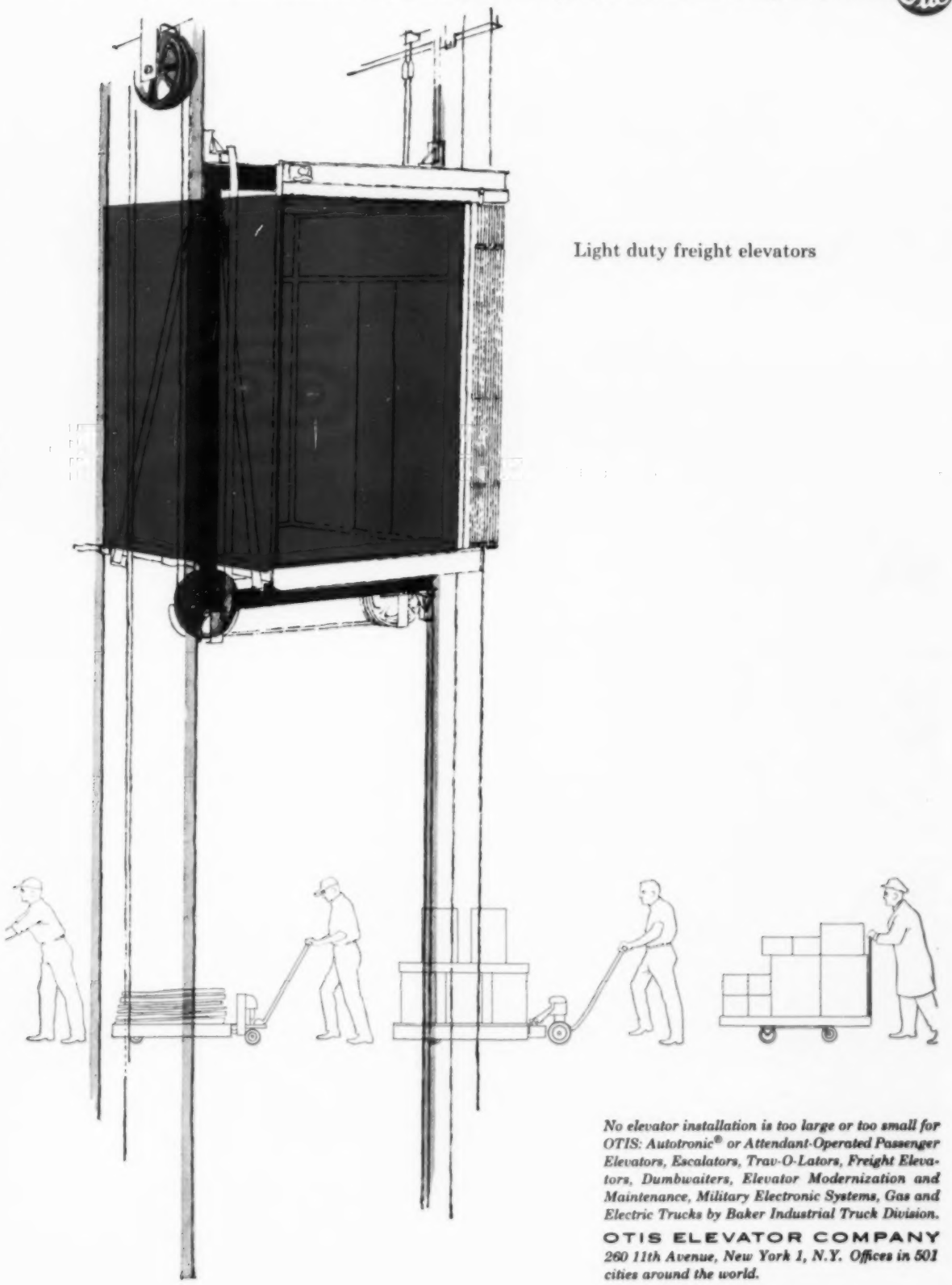

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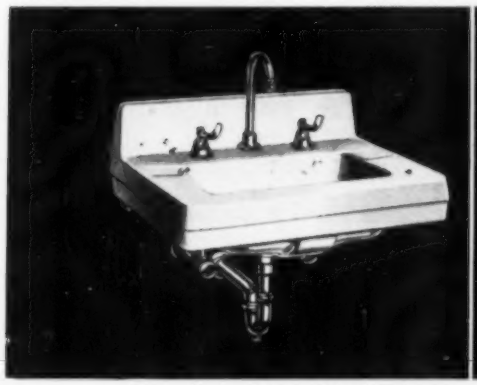
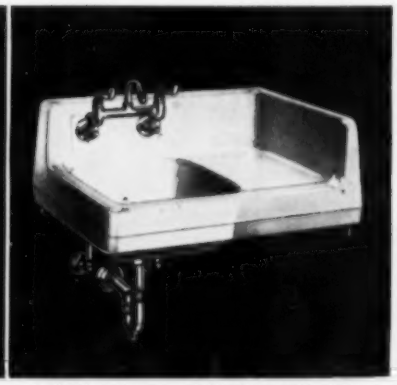


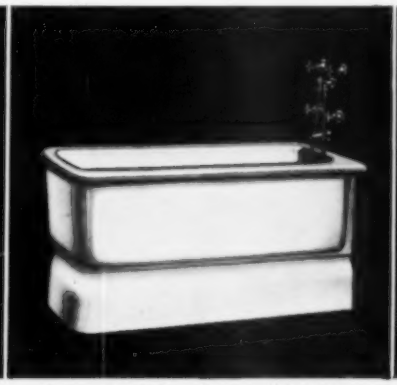
Convenient wrist operation is a feature of this Crane *Norwich* vitreous china lavatory. Gooseneck spout accommodates pitchers, vases, etc.

Foot-operated valve on Crane *Oxford* vitreous china lavatory prevents cross-infection. Hands never touch faucets.



Hygiene lavatory is ideal for patients' rooms. Available for right- or left-hand corner installation, also, without side splash.

Crane *Coolbrook* vitreous china, semi-recessed drinking fountain has elevated bubbler base for maximum sanitation. Available with single or central water chiller.



Crane *Institutional* free-wall bath, to build into end wall. Made of durable cast iron with porcelain enamel finish. Cast iron base included.

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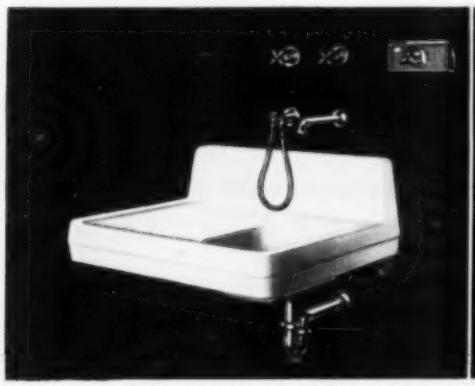

Infants' bath made of Crane *Duraclay*. Smooth, vitreous china surface is kind to babies' skin. Includes 20-gallon tank with dial thermometer.

The *Cornell*, one of several service sinks in the Crane line. Has flushing rim and siphon jet flushing action. *Duraclay* construction assures long service, easy maintenance.

Crane *Placidus* closet has whirlpool, quiet-action bowl and flush valve that minimize noise. Has elongated rim, open front seat.

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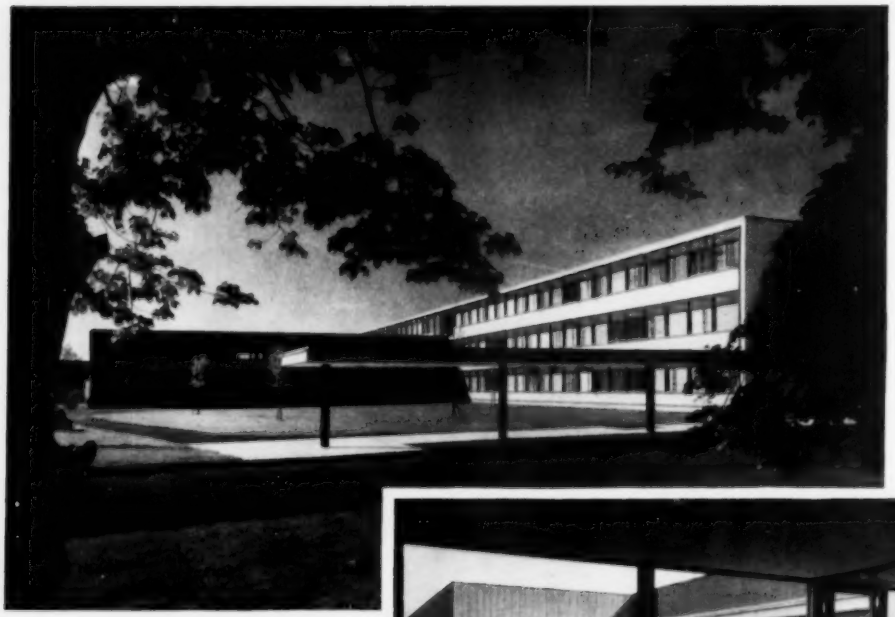

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The first installment of an article:

Notes on a French Horn

by

Henry S. Churchill, FAIA

". . . the carvings of Elne"

France has cast her spell over men for many, many years. Mr. Churchill recreates this mood by taking us through the maritime provinces, with their reminders of Rome and the middle ages, their foods and their wines, and their ever-present mountains and sea. Next month he will roam further in France, and talk about the creation of space and the comprehension of architecture.

Le Devot Christ

NOTES ON A FRENCH HORN

I

I often wonder why one should go anywhere but France. What has any other country got that she hasn't got? For in France almost anything you wish can be found, perhaps only in miniature, it is true, but if so it will be a perfect miniature. The fog and gray granite of the Breton peninsula is ancient and Druidic, the forest of Broceliand rustles with the Gaelic myths, and Tristan survives his Wagnerian tortures. The sea is a beach sea, a rock sea, a resort sea, a fisherman's sea. It harbors ships, and it washes the rock of St. Michael of the Sea in Peril where the sea rises and falls twenty feet or more four times a day.

To the south is the other sea, Provence, the strange delta of the Rhone, the long curving coast from the Alps to the Pyrenees where the sea neither rises nor falls; there is the violence of Gascony, the flatness of the Landes, the Gorges du Tarn, the volcanic peaks of Auvergne, the gentle beauty of Touraine, the grandeur of the Basse Alps, the wines and churches of Burgundy. Nor is variety of physical things the only appeal: One can savor—or be repelled by—St. Bernard of Clairvaux and Voltaire; Charlemagne and Danton; choose, if one cares to choose, between Nostradamus and Descartres, Francois Xavier and the Marquis de Sade. One can look at the sculpture of Moissac, and the Beau Dieu of Amiens, at the Cristus of Perpignan and at Maillol. Leonardo da Vinci came to France, and Picasso. "France," as du Bellay says, "mère des arts, des armes et des lois." Almost with their dying breath Archbishop Turpin and Oliver and Roland cry out, in the Chanson de Roland, for *la doulce France,* when do we, O God, see her again?

It may not be long before all this is lost except in the notes of horns played by nostalgic players on dark nights. For soon, under the aseptization that marches relentlessly on from West to East across the gray Atlantic, the characteristics of France that make for what are now trite and hackneyed words—however vibrant each individual's reception may be when, for the first time he perceives them first hand—these characteristics will all belong to the past. The future, if there is to be any future, will have to become similar to the future of the North American States. The subcontinent of Europe will brutalize itself either as a province of "the states" or as a peninsula of Asia. It may be that France can be wrapped up, like a fine piece of cheese and preserved so—like the melancholy Parthenon or Williamsburg. The inhabitants will be dressed in the costumes of the nineteen fifties, earning a living as *gardiens* for the museum pieces, showing travelers how "real" food used to be prepared so that it had some taste instead of being just ground beef or hog-wash, and telling tall tales about fermented juices without cola in the days before the Wine Road became an eight-lane highway running right through Montrachet. There will also, perhaps, be some tape-recordings of old books for those who care to listen. And, as always, music . . . whatever the unhappy process of change, one thing is sure, that it will be France that will keep and preserve to a long lingering last, the pleasures of the table, the vine and the mind.

II

The purpose of these notes, for that is all they are, pretending to no scholarly distinction, is to give pleasure to the reader and to give the reader a sense of the pleasure that is in architecture. I see no reason to try to define what architecture is, any more than to try to define literature or music. Indeed, I could not do better than to follow T. S. Eliot about the function of poetry, of which he says "The first [function] I think, that we can be sure about is that poetry has to give pleasure. If you ask what kind of pleasure then I can only answer, the kind of pleasure that poetry gives: simply because any other answer would take us far afield into esthetics, and the general question of the nature of art."*

And so with architecture.

It is, of course, impossible to say in words what is the pleasure that architecture gives, for no art can be transliterated into another art. Each art evokes its own associations, its own reflections. Whatever intellectual evaluation or comparison it is possible to put down in words remains an intellectual exercise. It is undeniable that this form

of intellectual exercise has its fascination, its excitements and rewards of new discoveries and deepened understanding. But it will not tell you what it is that moves you, nor what it is you love so that you want to know.

Therefore, I can only hope to convey by indirection, if at all, the feeling I have for architecture as part of the world in which I have lived, the Western world.

I wish to be quite specific about this limitation. For architecture, or indeed any art, to have really profound meaning must be a part of one, of the whole being which is formed by the men, women and past culture and tradition in which one has one's being. If I know best the "Western World," and by my own selection in that world respond most to my own country and to France, that does not mean I fail to see beauty in other cultures and places. But the Taj or Ankor Vat can never be to me what Chartres, for instance, is. Nor is this provincialism, for wide as the wings of the airplanes now are, there is neither time nor mind enough to comprehend it all. Rather it is that the Museum Without Walls is the new provincialism, the continuing eclecticism.

III

The cities of France haunt the memory; they have visual fragrance.

Nimes. The Avenue Victor Hugo is a wide street with smart shops and the best cafés. It is like the main shopping street of most French cities, a small edition of the Boulevard Haussmann, just as our Main Streets are all alike. The Avenue Victor Hugo in Nimes differs from its kindred avenues in that, at one end, opposite the Renaissance facade of the old Théatre, is the Maison Carré, and at the other end is the Arena. This is not a minor difference.

The Maison Carré does not face the Avenue, which runs beside it, not in front of it. It is not grand and impressive, it is simply more beautiful than one is led to believe a Roman temple could ever be. In fact, it is so beautiful one just wants to look at it. It is hard to say why, but to use the words of Paul Valèry, it sings in the Provençal light and one justs wants to listen to it. It is a building that one is glad to see and hear.

What makes the Maison Carré different from the dozens of similar buildings all over the Western world, some contemporary Roman, some in the style of Rome? It is unimpressive in size, and inconspicuous in location: It makes the Church of the Madeleine seem gross, even rude. Perhaps it is the proportioning of its parts one to the other; perhaps it is the curvatures of the cornice and other "corrections" after the Greek manner; perhaps it is just the right size to be comprehended as a whole.

The Arena, at the other end of the Avenue, is impressive. It does not sing. It too is to one side, not visible until you come to it, the great eye of a spiral, for the Avenue widens and wraps itself around. That it is there at all is remarkable, for it housed a small village for some hundreds of years, stone huts made of its stone. It is handsomer, on the outside, than its twin at Arles, but that is because it is not so closed in, and it is possible to follow the play of light and deep shadow as one walks around it, and the sun too can do likewise. Roman architecture needs space.

The Arena is as crude as the Maison Carré is refined. It is a challenge to the eye and nothing to the ear. It is the repetition of the arched forms made variable by the sun that makes the challenge. The repetition of the arches around the curve of the building give it the force of endlessness, as with the Colonnade of St. Peter's. The repetition of the same form endlessly changing, never the same in perspective or in the light.

Away to one side are the Gardens of the Fountain, under the shelter of the steep hill that is crowned with the ancient Tour Magne, another relic of Rome. The gardens are architectural gardens, made of steps and terraces, of sunken porticoes and cupid-embraced vases at the corners of the balustrades. There is water everywhere, murmurous under the hill, silent under the half-submerged colonnades. There are levels of stone terraces, flanked by broad stone steps, with ornate balustrades. Below, the level, placid water, slimy and reflective; beside, pools with swans, reflecting the hill and the sky. At one side are the pleasant ruins of a Roman bath or temple or something, with umbrella'd tables and the usual warm drinks

Canal at Narbonne

*T. S. Eliot, "On Poetry and Poets," p. 6.

and sugared ices. On the other side a fine mall bordered by the canal that takes away the water from the colonnaded reflecting pools and the swan lake, a mall at all times busy with men playing *boules*. It is one of the most graceful of gardens, distinguished, courteous, not a silly little English park with bushes and a lot of nature.

From the great iron gates which close the main axis an overly wide avenue leads dustily toward Rome from whence Nîmes came. Nîmes is Rome, the Renaissance, no Catholic mysticism, no incense.

Perpignan, at the other end of the arc of the sea, is the old capital of Roussillon, a province as old and romantic as Provence, but without the sentimentality and the *mistral*. Roussillon is Iberian, and is dominated by Mont Canigou as Provence is dominated by Mont Ventoux. Perpignan is the smell of incense and of priests, for it too is Iberian, not Roman. The Spanish emperors of Rome passed by but left nothing. On the one side is the sea and Majorca, on the other the mystic mountains, the smell of trees in bloom, the echoes of Pablo Casals which are, in some strange way, the echoes of Roland's *oliphant*. There are Romanesque churches and Spanish forts and in the Cathedral of Perpignan hangs the "Devot Christ."

The Devot Christ is the most agonized of Christs, the most conclusive image of suffering and sacrifice . . . for a long time, after a very long siege, a "total" war ended only by starvation, the people of Perpignan were known as "les mangeurs des rats." The Devot Christ is their Christ, not God suffering for Man, but man suffering for himself, without hope or pity. It is Iberian, for the Iberians are cruel and never sentimental; they are not, like the Germans, sadistic and self-pitying. Suffering to them is chronic; cruelty, the keen edge of suffering, is a fact like any other.

At the other end of the arc of the sea is the Pietà of the School of Avignon: Woman suffering for Man.

A few steps away from the Sacristy in which is the Devot Christ is the Loge de Mer, a tiny piece of Venice. It is not on the sea, nor does it even distantly overlook it, as does the Palace of the Kings of Majorca. It is delicate and charming, and the courtyard shelters a delicate and charming Maillol nude, "La Méditerranée." The tiny flagstone square alongside relates it to the Cathedral and the hidden Christ. Here is the sea, open and nostalgic, there are the mountains, menacing and claustrophobic, both present and unseen.

To the west and north the mountains, to the south the Mediterranean, *mare nostrum*, "the tideless, dolorous midland sea." And it is true that the midland sea is dolorous: partly because it is tideless and sinisterly still and partly, perhaps mostly, because the blue is too blue, all colors too colorful, so that there is no sparkle in the sun, and everything is bright but not gay.

To the east, romance: Narbonne, once the capitol and very head of all the coast, Beziers, Toulouse and Montpellier. Vines and fruit trees and olives. Carcassonne and the valley of the Aude. The whole big plain of the Mediterranean is tied together by the sea, the cities, the tree-lined roads and canals, the vines and olives, the ever-present blue silhouette of the Cevennes. It slopes from the Cevennes to the sea, it is traversed parallel to the mountains and the sea, the Pyrenees stop it at one end and the Alps at the other: it is all there in one long day's journey, from Cap Cerbère to Cap d'Antibes.

It can be done in one day, today. It took Hannibal and his elephants much longer.

IV

It is better to take one's time, looking beyond Maillol's Monument to the Dead, out across the harbor, remembering that like Hannibal's elephants we will not pass this way again; no, nor will Hannibal.

This western end of the arc of the sea, from Perpignan to the Spanish border, recalls in a small way the Corniche at the eastern end. It is not so grand, so varied, so rich in color, nor so studded with wealth nor bedecked with fashion. The road to Spain goes up and down with views now over the sea, now across the rough foothills to the crest of Mont Canigou. The little ports below were pirates' and smugglers' ports, Collioure, Port Vendres, Banyuls. Collioure is the perfect painter's port, with crescent beach and rose-red fort and colored boats; not yet a tourist-trap, it will be. So we can go on to Port Vendres, with its harbor and quais big enough for good-sized coasters plying between Spain and the Adriatic and perhaps even more venturesomely. Overlooking the harbor and the busy quais is the charming little *place*, on the top of a small cliff, where is the Memorial to the Dead, finely done and circumspect, like all Maillol's work. At Banyuls is another Monument, a fine one on an island; and another at Elne, back of the Cathedral with its wonderful eleventh century door and marble cloister, this one the figure of a simply draped girl on a simple square pedestal. Behind it is the severely buttressed wall of the Cathedral terrace, and the ancient *chevet* itself. There is nothing either Iberian or Romanesque

about Maillol: across the years are only stone, simplicity and death surviving in "graven images." Who made the carvings of Elne is not known, and perhaps in even a hundred years "Maillol" will be unknown—as he is already unknown, his name just a label without meaning, to distinguish what he left of himself from what others left of themselves, at Elne or Chartres or elsewhere.

In the spring, as the waters of the Tet and the Tech come swirling down from Mt. Canigou, a flood of blossoms whirls up the valleys. This too has been going on for a long time.

V

Meaning, in an abstract art such as architecture has as little meaning as in music. Or in nature, where the flood of blossoms across the world proceeds, if not purposelessly, which is something different, certainly meaninglessly. Even in speech there are phrases that stir images and have in themselves no meaning. "The grapes of wrath" is such a meaningless phrase, but like the crypt of Mont St. Michel and El Greco's View of Toledo it is unforgettable; nor can "Full fathom five" be taken apart and given literal sense any more than can Azay-le-Rideu on a spring day. The Dome of the Invalides is not majestic but majestical, as majestical as "the army of unalterable law."

"What time the morning stars sang together, and all the Sons of God shouted for joy" . . . this is Chartres, this is Bourges . . . Hagia Sophia, perhaps, and Taliesin East. It is not the Parthenon, nor the Maison Carré, nor the Manufacturer's Trust. These do their own singing, as Paul Valèry would say.

Some of this country is brick country. Outside of Perpignan is the Fort of Salses, a ponderous affair in the best Spanish stone-brick tradition. It is impressive in its setting of arid fields dotted with blue thistles, under the hot southern sun. It must have been even more impressive before Richelieu had forty feet taken off the towers and when the moat was full of water. It is not of much consequence as architecture, although it is a good type of Renaissance fortification, very different from the medieval castles. It is just that, heavily weighting the plain, it proclaims its brutality simply and by contrast to the olives and the small hidden churches. At the same time it is sad and pastoral. One thinks of that terrific upsurge of red brick and stone at Coca, and then Salses amongst its thistles is sad indeed.

Toulouse, the ancient pride and glory of Languedoc, wears proudly a brick cathedral that is still a crown to the pride and a retainer of the

". . . *this is Bourges*"

glory. The high tower rises from the multiple chapels which crowd around it and seem to uphold it, and the tower sways back and forth as the clouds drift past and pull it first one way and then another, a cloud-riding tower that is never still. The whole structure rides the dusty little square like a ship at anchor.

St. Sernin is no longer the center of the city; it does not dominate it as it must have done when Toulouse dominated Languedoc and Provence, and the University was second only to Paris. Yet it remains a mighty edifice, with only Albi for a rival in brickwork.

Toulouse has other buildings, but not of brick, that are noteworthy Renaissance architecture, and some fine streets and squares and some new and banal ten-story tenements. For Toulouse is again becoming the capital of the south, with power from the new dams and hydro-electric plants and fuel from the new wells of natural gas.

It is strange how these ancient cities, long somnolent on almost obliterated cross-roads, come to life under the stimulus of new technologies. The new, dull tenements do not yet compete with the spire of St. Sernin: in time they will, probably, but the spire will still mark ancient cross-roads: to the south, Altamira; to the north, Lascaux; upwards, the future which may not be as long as that past.

The Cathedral at Albi belongs to St. Cecily, who was tortured to death. The red-brick fortress that is her church was built by a violent and bloody Bishop, Bernard de Castanet, who enslaved the

poor and imprisoned, tortured and robbed the rich, to his greater glory. And greater glory indeed it is; St. Cecily's church stands only just below Chartres and Mont St. Michel and Paris in the hierarchy of Gothic structures.

It dominates the town and the Tarn, together with the Bishop's Palace and the Bishop's Donjon. The dominance must once have been terrifying, out of all proportion to the offenses of man . . . and yet, only two generations before the saintly Bishop, Simon de Montfort had slain thousands upon thousands of men, women and children, so that the Tarn had run brick-red and the culture and poetry of Languedoc had been washed away, down the Tarn to the Garonne and into the salt-marshes of that land of even greater evils, the Gironde. Castanet still had to build a fortress for a church, so that the evil done in the name of God could be justified and defended.

What was it about Albi and its people that made them stubborn and defiant of great Christian doctrine? Why was it necessary to worship God in a fantastic fortress, if indeed He was there worshipped by any but those whom the Bishop permitted? Perhaps, as so often, some of the answer lay in the strange and isolated valleys and gorges, the reaches of the upper Tarn, wild and desolate; the concealed valleys of the Black Mountain, many almost impossible to reach even today, with villages rejoicing in such names as Miraval, and La Bastide de Esparbairenque, places shut in, lonely; people rigid and always ancient like the hillbillies of our South, created to be damned and proud of it and insistent on it as the only measure of their justification for life. The Albigensian Heresy, how else remembered or else how soon fogot. . . . "Kill them all," says Simon at Beziers, "God will know His own." So the world remembers, so it will remember Guernica . . . Intimations of Immortality perhaps, but beyond Wordsworth.

Only the Judeo-Christian tries to justify man's inhumanity to man by calling it God's will. To this peculiarity we owe much; the Book of Job, and Albi.

If Bishop Castanet lingers on in the Beyond, perhaps it is his peculiar purgatory to know that his Episcopal Palace now houses the paintings of evil men and even more evil women made by Toulouse-Lautrec—unless God's grace has revealed to him that Toulouse-Lautrec's sufferings and his spiritual achievements were of the same order as those which created St. Cecily's.

The Cathedral is somehow all this and more. Great architecture imposes itself, like great music. It is voiceless, yet it speaks; motionless, it changes, it urges one to see it from here, from there. The power of Albi, its quality of dominance and terror outside and of vast and simple enclosure inside are a different content from the triumphant exaltation of Chartres, or the hard, seasoned, purified faith of the Mount.

This is dominance, and one remembers that Castanet was a Dominican, the Hound of God, one of the order specifically entrusted with seeing that the truth was nothing but the truth. There is no subtlety about St. Cecily's, and certainly no passion and no aspiration. What it has is perhaps the power of absolute belief, of confidence that this is so.

In the north there was reason and dissertation, and with reason doubt enters, even if finally vanquished by the dissertations of St. Thomas. But here there is no doubt. It is a great, a formidable spiritual act. No doubt.

Beyond Albi to the south is Mazamet, and at Mazamet you climb straight up to the ridge of the Black Mountain and after a long descent come to the valley of the Aude, Carcassonne and the Mediterranean in which all gothic mysteries are drowned. ◄

IN MEMORIAM F. L. W.

28

Kings do not shout in the market; nor, once crowned,
Pass the time of day with hucksters, rather bide
In shadows regal while forced to stand aside
For passing petty princelings that abound
In shriveling times to claim new empires found,
New secrets solved, all truth from its matrix pried;
But, the throne restored, spread splendor multiplied
Past count from vaults of gold on gold compound.

Kings do not bow; but kings must also die,
No less than lesser men who quietly pass
From view in pale phantasmagoric stream.
Kings must end; and yet, to me it seemed
True kings in word and work so far surpass
Mutability, that Time itself stood by.

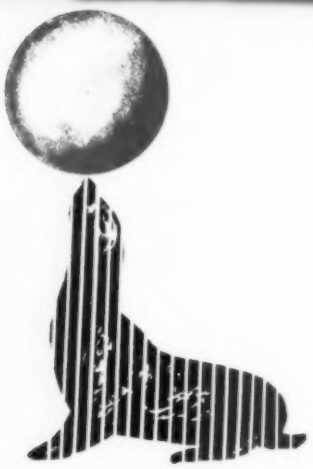
LANDIS GORES, AIA

SKETCHES BY WILLIAM LACY

An avid traveler, quick with his sketchbook, Mr. Lacy brought back these drawings from Mexico City (above), Paris (below, left) and Copenhagen (below, right).

WILLIAM LYMAN, AIA

Day of the Stunt



► Here in Detroit a favorite pastime among architects is throwing stones at the automobile stylists for their endless aberrations in the art of tail fin design and the application of chrome, which on occasion seems to be the sum and substance of automotive styling. This verbal exercise is lots of fun but it obscures some fantasies much closer to home: More and more architects are going off on little aberrations of their own that lead them further and further from architecture. It is therefore encouraging to note that the theme of the recent AIA convention was "Design." We may be able to rescue ourselves before it is too late.

One unfortunate weakness among architects is their temerity in criticizing each other's work. This silence has resulted in total confusion among architects and public alike. The latter looks upon architecture as it looks upon automobiles; the most sensational is best. The public has lost its ability to discriminate. If something sells, it must be good. Cut off more and more from nature, the public depends on the mass media of communication for its esthetic taste. The diet is a kind of continual dessert, with no meat course. In place of a good blue-plate-special, it is offered the folded-plate.

What have architects been doing while this confusion has been developing in the public mind? They have been confusing themselves in spirited arguments over "humanism," "new brutalism," "romanticism," "new classicism," "functionalism," "directivism," "individualism," and "anonymism." We now need a pocket dictionary to get through each day. Instead of designing buildings for the people who are to use them, architects have been designing buildings for other architects and for the architectural magazines, which vie with each other for the privilege of featuring these buildings designed for architects. The art of verbal rationalization has become second only to the art of plastic invention. What a refreshing thing it would be if, by one stroke of a magic wand, we could eliminate all architectural magazines for ten years. Architects would have to think about function once more and the public would start getting some honest architecture. The egocentric prima-donnas would have a rough time of it. With no magazines to picture their wares, they would quickly lose all purpose in life. But people would start getting buildings that fitted their needs, their sites and their pocketbooks. And buildings might even start looking as though they were meant for human beings.

Many readers will say this criticism is unjust, that the architectural profession does not deserve a blanket indictment. I say we are fast approaching the moment when the profession as a whole will be held accountable for the confusion that is already upon us. It is time we started straightening things out. The first step would be to understand that architecture is more concerned with satisfying basic human needs than in expressing the architect's ingenuity. Architects who attempt each time to invent something new are in the wrong field; they should be doing basic research in the sciences. In attempting to be architects, they mistake progress in techniques with progress in arts, and scientific efficiency with social purpose. They are fast removing themselves from the great mass of people; they have become an elite. They are losing humility when they need to be gaining it.

What about the building materials industry? Certainly architects should cooperate with this im-

A graduate of Michigan and the Harvard Graduate School, a product of the offices of Gropius, Breuer, Coolidge, Koch, Stubbins, Saarinen, SOM and others, now with Smith & Smith of Royal Oak, Mich., and a former Secretary of the Detroit Chapter, a contemporary designer takes a long, hard look at contemporary design.

portant segment of the nation's economy. But it is equally vital that architects resist the building materials industry when it is in the public interest. There is a limit to how fast architects and the public can assimilate new materials. We have been able to get along for a thousand years with brick and mortar; surely there is no compelling urgency to run the gamut of the materials alphabet. The building materials industry thrives on a constant flow of new products; architecture does not. We would do better to digest some of the materials we have. We forget that some of us will still be around fifty years from now when many of today's buildings will be falling apart at the seams. We may wish to conceal our identities long before that time. There were past periods in history when no architect outlived his buildings; we will not be as fortunate.

What about architectural education? One thing is definitely wrong with it. By placing too much emphasis on employing exhibitionists to teach design, the schools betray their students. Success in the curriculum is often measured by one's ability to excel in structural innovation and plastic design. This measure may be taken on little more than a student's ingenuity at making graphic presentations, paper architecture of another sort. A second major failing of architectural education is its preoccupation with techniques, particularly in the field of structures. Let us continue to have structural experimentation but let us not call it architecture. Let us have more emphasis on designing buildings for people. Let us look beyond structures and mechanical systems for inspiration in design. Do any of us care what Marilyn Monroe's bones or lungs look like? Lastly, let us have more study of the history of building design as related to use.

We speak of a past hierarchy of buildings with the church or the cathedral at the top. Perhaps we need to look at our buildings today as a new form of hierarchy: The home, the church, the elementary school and the funeral parlor in a small inner circle where sentimental attachments are valid and to be respected; then a slightly larger middle circle containing the community hospital, the high school, the public library and other municipal buildings, where sentimental considerations are less important; and, lastly, a much larger outer circle containing everything else — buildings for commerce, hotels, transportation terminals and factories. Before designing a building, we would determine where it belongs in relation to man standing at the center of the inner circle. The closer a building is to man, the more personal and conservative should be its architecture.

There is no magic formula for great architecture but we might create more of it if architects would get back to a few basic facts and principles:

- Man needs to identify himself with his natural surroundings. We should look more closely at our sites and our materials; our buildings have been taking us further and further away from nature.
- The sun and the weather are with us to stay, in differing forms and quantities depending on where we happen to be on the globe. We cannot ignore these timeless factors.
- Progress in architecture is achieved through evolution, not revolution. Architecture should therefore be conservative. Remember, it is for people.
- When we try too hard, we very often fall down.
- Architecture is concerned with the sequence of space; the buildings themselves form but a small part of our total physical environment. Architects are too concerned with individual structures and their exterior envelopes.
- Buildings only start to live after they are built; their life comes from the people who use them.
- Time can build beauty into buildings. In many of our new buildings, this principle is working in reverse; the older they get, the worse they look.
- Modesty is good in architecture as it is in private life.
- Everything that is possible is not necessarily desirable.

There is one final point to ponder: Future generations will largely remember us by the buildings we construct. Are we preparing to leave them as good a heritage as our predecessors left us? ◄

Replanning Downtown Detroit

The Architects' Urban Design Collaborative

► Two years ago, under the auspicies of the Detroit Chapter of the AIA, a group of architects, representing many prominent offices in Detroit, held an organizational meeting to discuss ways and means of contributing to the betterment of their own city. The group, actually, was an outgrowth of the former Architects' Civic Design Group, which was in existence from 1943 to 1948. At that time the architects, under the guidance of the late Eliel Saarinen, organized for the purpose of conducting voluntarily an independent study of the basic principles of city planning as applied to Detroit. Over a period of five years the members of the group, despite the pressure of their own work, brought their study to a conclusion. The result of this work, in form of models and drawings, was exhibited at the Detroit Institute of Arts. The fresh and exciting ideas thus presented, no doubt influenced and contributed greatly to the present Master Plan of Detroit.

Reprinted from the March 1959 issue of the Bulletin *of the Michigan Society of Architects.*

The Architects' Urban Design Collaborative, as the new group calls itself, continued where the other group left off. The intervening twelve years saw a realization of part of the Master Plan of Detroit which included two expressways, the Civic Center, the University Group and tentative studies for many other important projects.

Working within the framework of the objectives of the Master Plan, the group undertook the study of the Central Business District, an area of approximately 800 acres. It was encouraging to see the warm response of the architects towards the entire project. In all thirty-five architects representing a number of architectural offices or working as individuals, took part.

Welcoming the work of the Group was Charles Blessing, Director of the City Plan Commission. All the economic data and other research work which the City Plan Commission had were made available to the group. To absorb the data and understand the problems was the first task. Only then could the group come up with new and fresh concepts which would influence the yet unplanned areas of the CBD.

An executive committee was appointed which set up the following program:

1 Studies and assimilation of planning data.

2 Planning analysis and design recommendations.

3 Preliminary architectural studies for separate areas by groups or individuals.

4 Review and co-ordination of preliminary studies among the members of the group.

5 Preparation of the material for final presentation.

Meetings and workshops were held regularly in the Old City Hall, made available to the group by the city. All preliminary schemes, in the form of sketches and models, were presented to the entire group for general discussion and criticism.

As the individual teams delved into the replanning of the CBD, it became apparent that, among other pressing problems, the more crucial ones were the following:

1 To provide proper and efficient facilities for bringing in and accommodating large numbers of vehicles. (To solve this problem alone would require a new, radical and imaginative approach in transportation techniques!)

2 To create an environment conducive to pleasant and relaxed shopping, recreation, personal and government transactions (created by large open plazas free of traffic hazards).

3 To replace the existing obsolete buildings with new structures designed for modern needs.

The group felt that this three-point program must be realized as soon as possible, if the city is to gain any advantage from the newly created Civic Center. It should be noted that a successful Civic Center must go hand in hand with a revitalized and economically sound CBD.

The works of the group presented on the following pages, identified by letters on the key map, are a culmination of the collective thinking of the entire group of architects. It is not intended as a final solution for rebuilding the "heart" of our city. Rather it is hoped that it would serve as a stimulant for the public, the government officials and the architectural profession to take a long range view and a dynamic initiative in the task of rebuilding our city.

LOUIS G. REDSTONE, AIA,
Chairman, Architects' Urban Design Collaborative

A | **Steve Oppenheim, Kurt Rheinfurth** (Smith, Hinchman & Grylls) **Richard Wolff** (Geer Associates)

RIVERGATE

Inspection of the site revealed that removal of existing structures presented major problems only in the case of the railroad and grain facilities. A preliminary study indicated that the cost of bridging over the railroad was incompatible with land values in the area and this approach was abandoned. Without relocation of the railroad no attempt could be made to exploit the potential of the site.

Direct access to the Detroit River then became the key feature of the development for a modern residential area with high-rise apartments, a yacht basin and boat spaces.

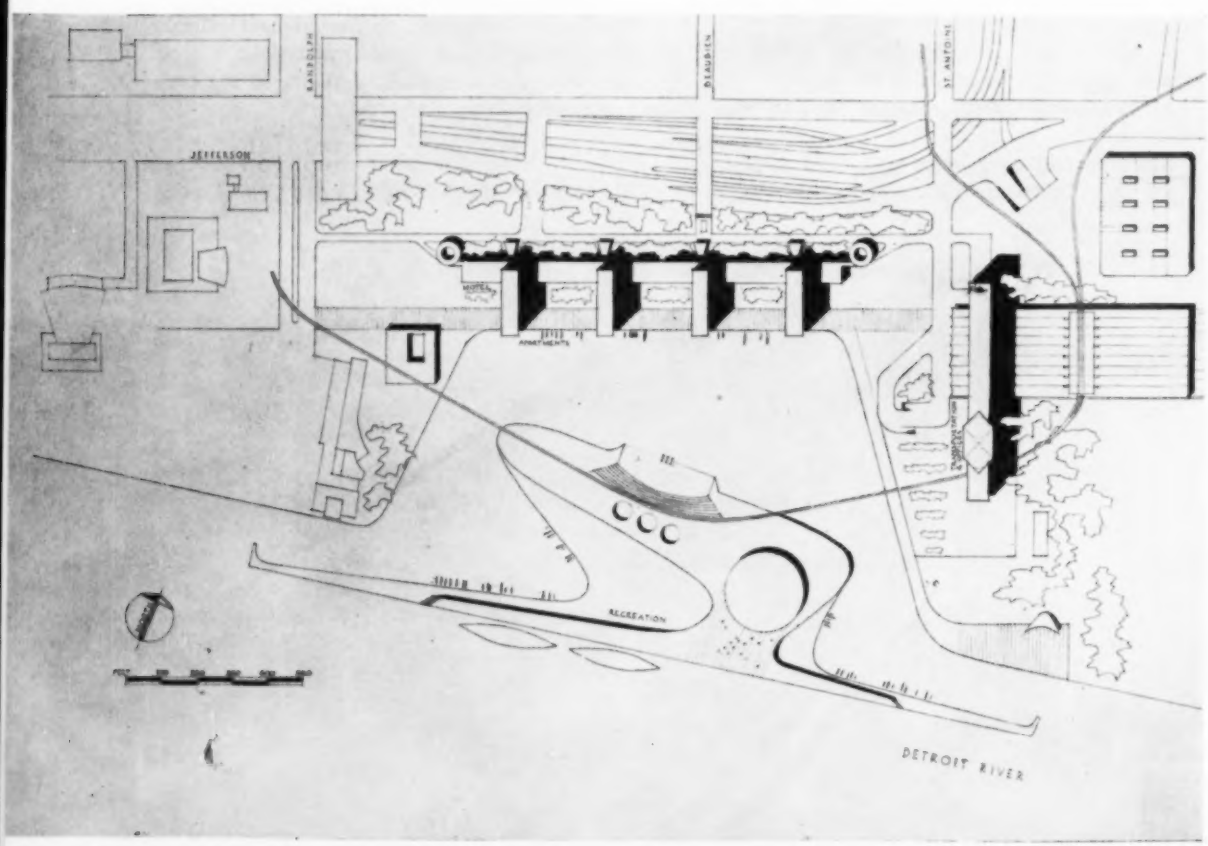
Three groups of buildings were arrived at: residential, recreational, and offices. In order to bring about a closer connection between the buildings and the river, a large part of the area was excavated, permitting the river to form a lagoon, and thereby creating an artificial island which could house the recreational facilities. Utilizing a thirty foot drop in grade between E. Jefferson and the river, about 250 spaces for yachts could be accommodated. The composition of the high-rise buildings was arranged to be open toward the river, forming a pleasant sequence of space connected to the Civic Center, and closed off by the tall building at the east end.

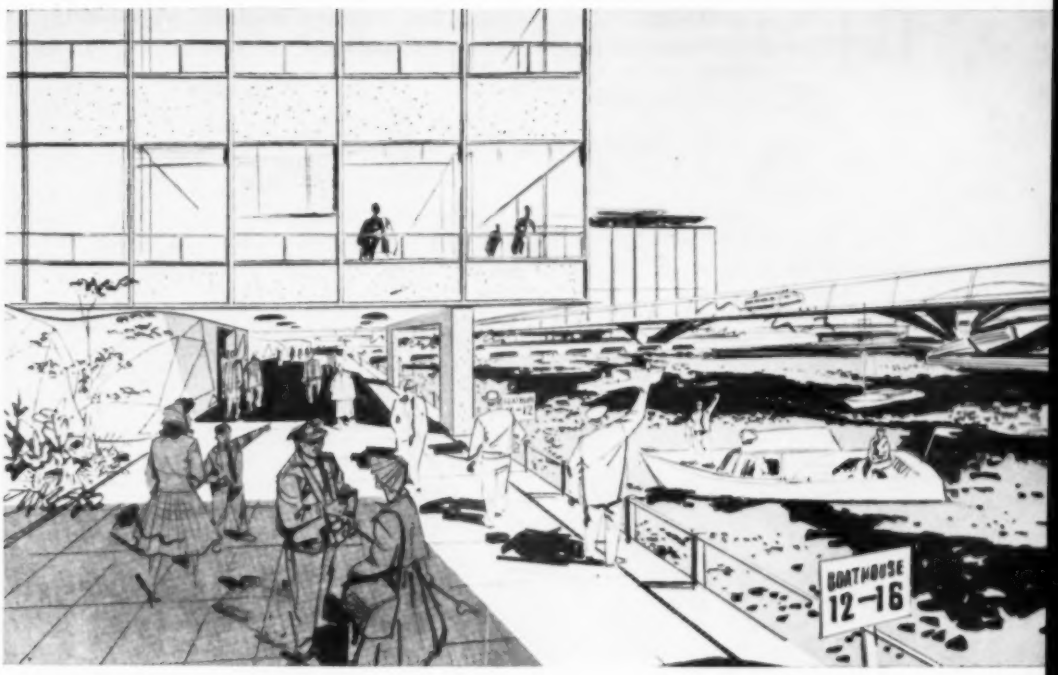
The four apartment towers and the motel-boatel are elevated, permitting a direct view of the river, both from E. Jefferson and from the pedestrian level under these buildings. A wide pedestrian mall connects the buildings and pedestrian bridges; a monorail connects to the island.

The apartment towers would contain a total of 250 apartments with direct elevator service to underground boat and car parking facilities. Access by car to the motel-boatel would be direct to the rooms over a spiral ramp; by boat, direct from the water level boat garage with elevators.

The island is conceived as a large indoor-outdoor recreational area. Boat harbor and boat rental area are located all along the terraced shoreline. Excursion boats dock here also.

The circular building houses a restaurant and indoor skating rink. On the northern part of the island an outdoor pool is provided for aqua-shows and sport events.





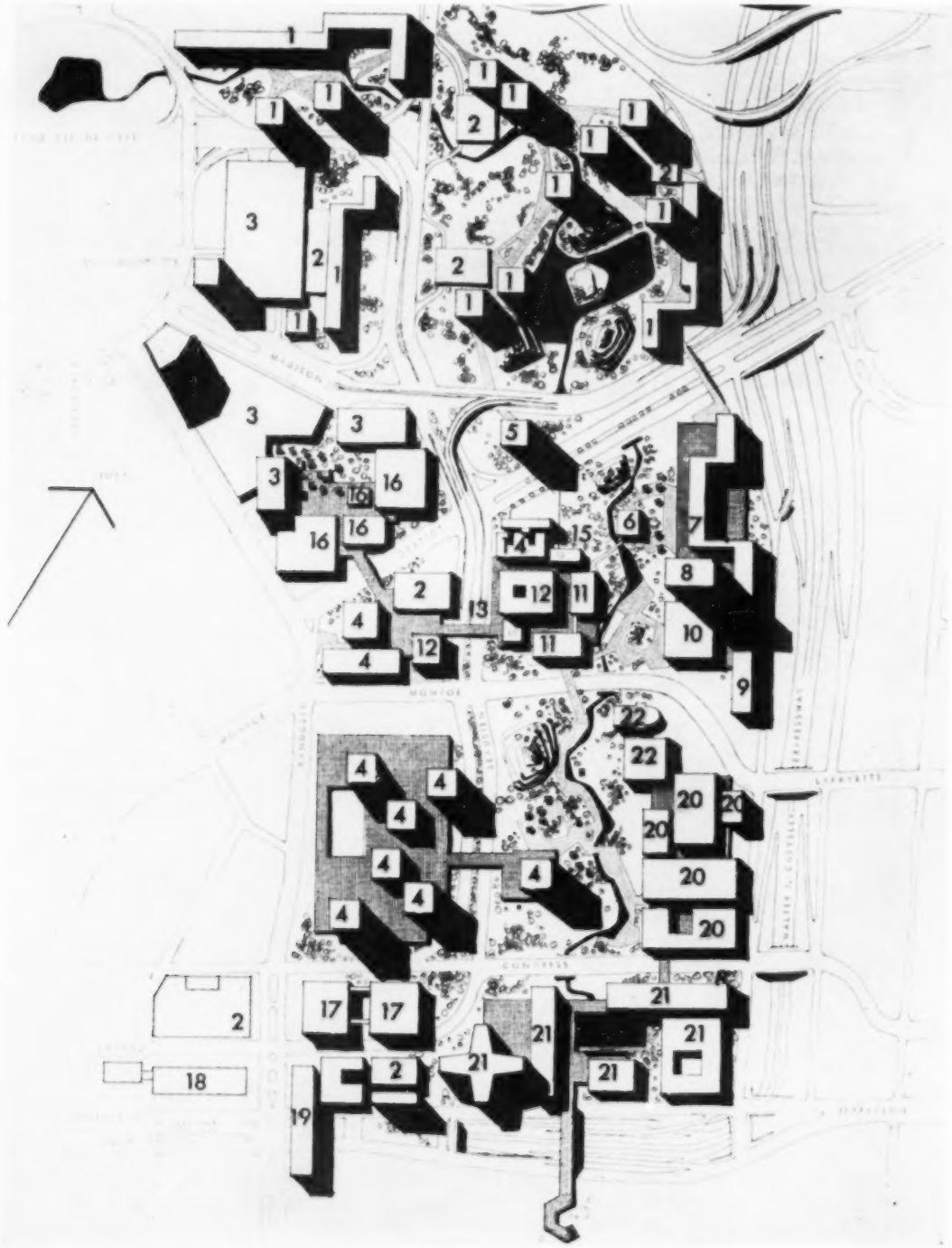
View towards the west.

View towards the east.

The third group of buildings contains office facilities. In the fourteen-story structure space has been provided for 350,000 sq. ft. of office area, plus 600 efficiency apartments. This arrangement permits out-of-town businessmen, who are retaining representatives in Detroit, to provide office space in close connection with living quarters. Moreover, it is believed that such a relationship of office and small apartment would be welcomed by many people working in offices.

Underground parking is provided for 4,000 cars with entrance and exit ramps linking directly with expressway. Escalators lead to railroad and pedestrian walks on ground level.

B | Offices of Eberle M. Smith Associates, Inc., Architects Engineers represented by:
Edward Hammarskjold, Charles W. Scurlock



1 Housing
2 Bus terminal and parking
3 Warehouses
4 Office buildings
5 Volunteer services building
6 Board of health
7 Hospital nursing unit
8 Hospital research unit
9 Hospital housing unit
10 Doctors' office building
11 Recorders court
12 Detroit Police Department
13 Police school
14 Wayne County Jail
16 Wholesale flower building
17 Transportation building
18 City-County building
19 Federal building
20 Wayne Univ. Medical School
21 University of Detroit
22 Museum of Religious History

GENERAL:

Although presently made up of decaying warehouses, sheds, shops, and parking lots surrounded by obsolescent hospitals and government and college buildings, this portion of the central business district retains an important functional role in the plan for revitalizing the downtown area. Including, as it does, elements of city and county judicial facilities; teaching hospitals importantly related to the Wayne University Medical School; and the downtown campus of the University of Detroit; all badly needing room for expansion and situated strategically between the central commercial area and Detroit's major urban renewal project, Lafayette Park, the area already possesses the important elements vital to its future life and growth.

ELEMENTS:

With the section north of Gratiot designated for housing, the southern portion would include:

A Expanded city and governmental facilities, including county jail and courthouse additions, sheriff's office, community voluntary services and various other social agencies.

B New hospital, medical research and professional office facilities to replace and augment the present obsolete and inadequate units in the area.

C New commercial offices, primarily legal, occupying an important position related to the city and county administration, the judicial area, and the financial district to the west.

D Expanded facilities for the University of Detroit downtown campus and cooperatively operated extension classrooms and laboratories for Michigan's three major Universities.

E A transportation center and central airlines terminal building related to the new bus terminal and Detroit-Windsor tunnel entrance.

CHARACTER:

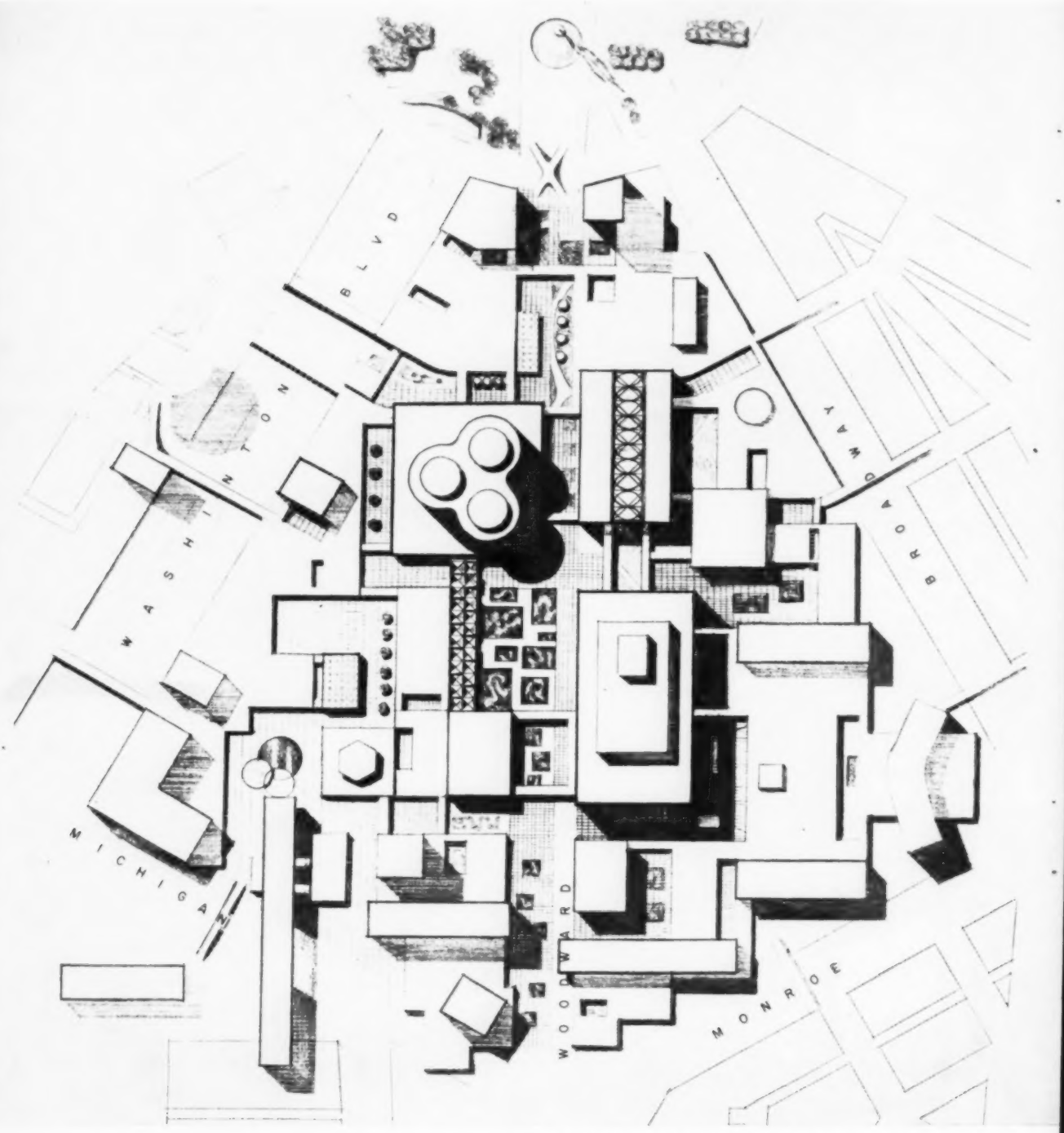
In the past and, unfortunately, in too much of present redevelopment and urban renewal, one receives the impression that the only aim has been to eliminate the automobile, without making a significant contribution of the elements that delight the senses.

If, in a basically urban environment, the planner can provide the visual and aural pleasures of splashing fountains and waterfalls; the spatial interest of bridges or changes in level, of ramps and stairs; the visual delight of trees, grass, flowers and, especially, of other people enjoying these pleasures, he will have made the man-made environment into an environment peculiarly fit for man.

This study is an attempt to suggest one such environment. From an area north of Gratiot Avenue conceived as buildings in a setting of green space to the part south of that line where one finds green spaces in a setting of buildings, a stream or canal makes the connection. In the area west of the apartments, the displaced warehouses and florists' markets find a new home in and surrounding a plaza accessible only to the pedestrian. In the more densely built up institutional area, no person is more than a few seconds walk from trees, benches, and flowing, splashing water. The traveler or visitor arriving from outside the city would receive a pleasant and delightful introduction to the city, and the Detroiter himself would have an important basis for civic pride.

View from Gratiot looking south.

C | Offices of Louis G. Redstone, Architect; Allan G. Agree, Associate Architect represented by:
Louis G. Redstone, Avner Naggar, Kiyoshi Mano, Bernard W. Colton, Stanley Aizinas, Alfred Gittleman



Plan of the heart of the CBD "Mainland" shopping center.

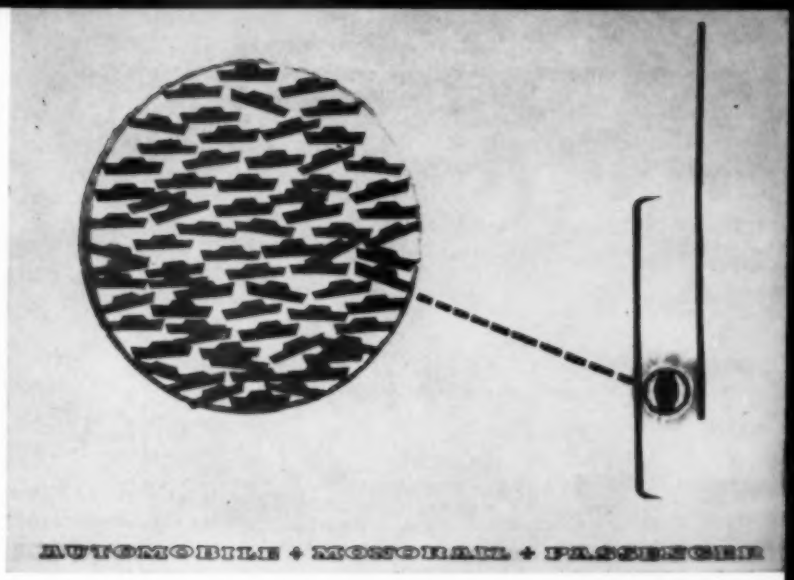


Chart 1

Congestion and parking problem created by 100 people using their own cars against the same number of people using the monorail system.

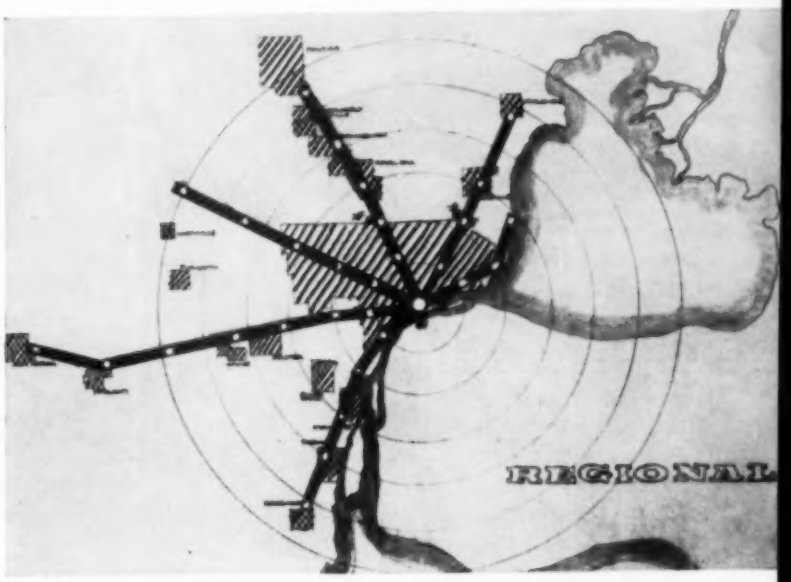


Chart 2

A system of mass transportation by monorail for the region.

This is a study of the "Hub" area of the CBD. To indicate the shopping character of the area it was named "Mainland Shopping Center."

Studies of statistical data confirmed the fact that an important contributing factor to the decline of downtown business areas was the lack of accessibility for shoppers.

As a prerequisite, therefore, to the architectural solution, this group took up a study of transportation problems affecting the area of CBD. Available data indicated that today approximately 50% of those commuting to CBD drive to work and 80% of those driving use their own automobiles. The CBD is "choked up" under present day conditions. Projecting yearly rates of increase of traffic into the future, it is estimated that in 20 years an area equal to the entire CBD acreage on one level would be needed to park automobiles coming into the area.

To attract more shoppers downtown, yet to limit the automobile influx, may seem paradoxical at first glance. Actually, the solution lies in a radically new approach to the means of transportation.

A radial monorail system is recommended which would work as follows:

a For the comfort of the commuter near his home, a self-propelled unit (30 m.p.h.) "the capsule" or a number of units, pulled by a tractor, collect commuters periodically at residential street corners. These would constitute the feeder lines.

b At certain terminal points (Chart 2) "capsules" become "monorailborne" components of a

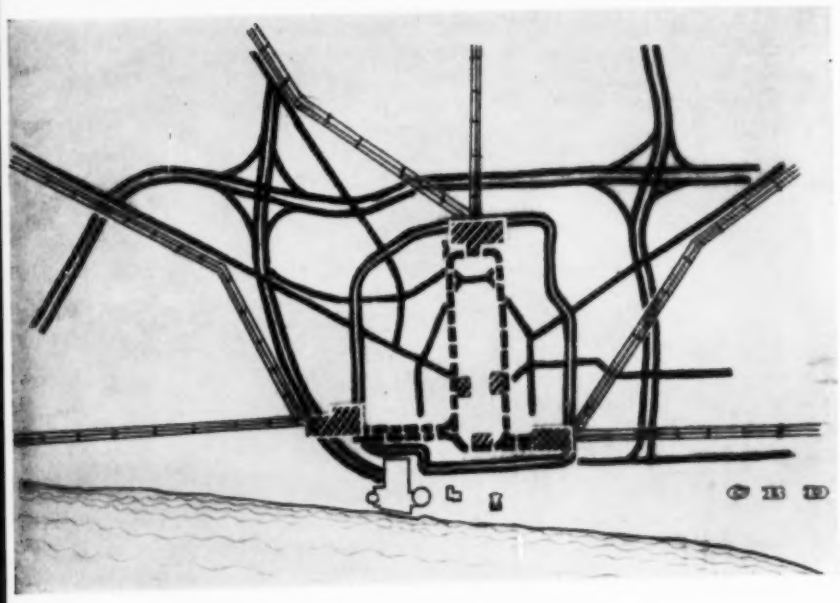
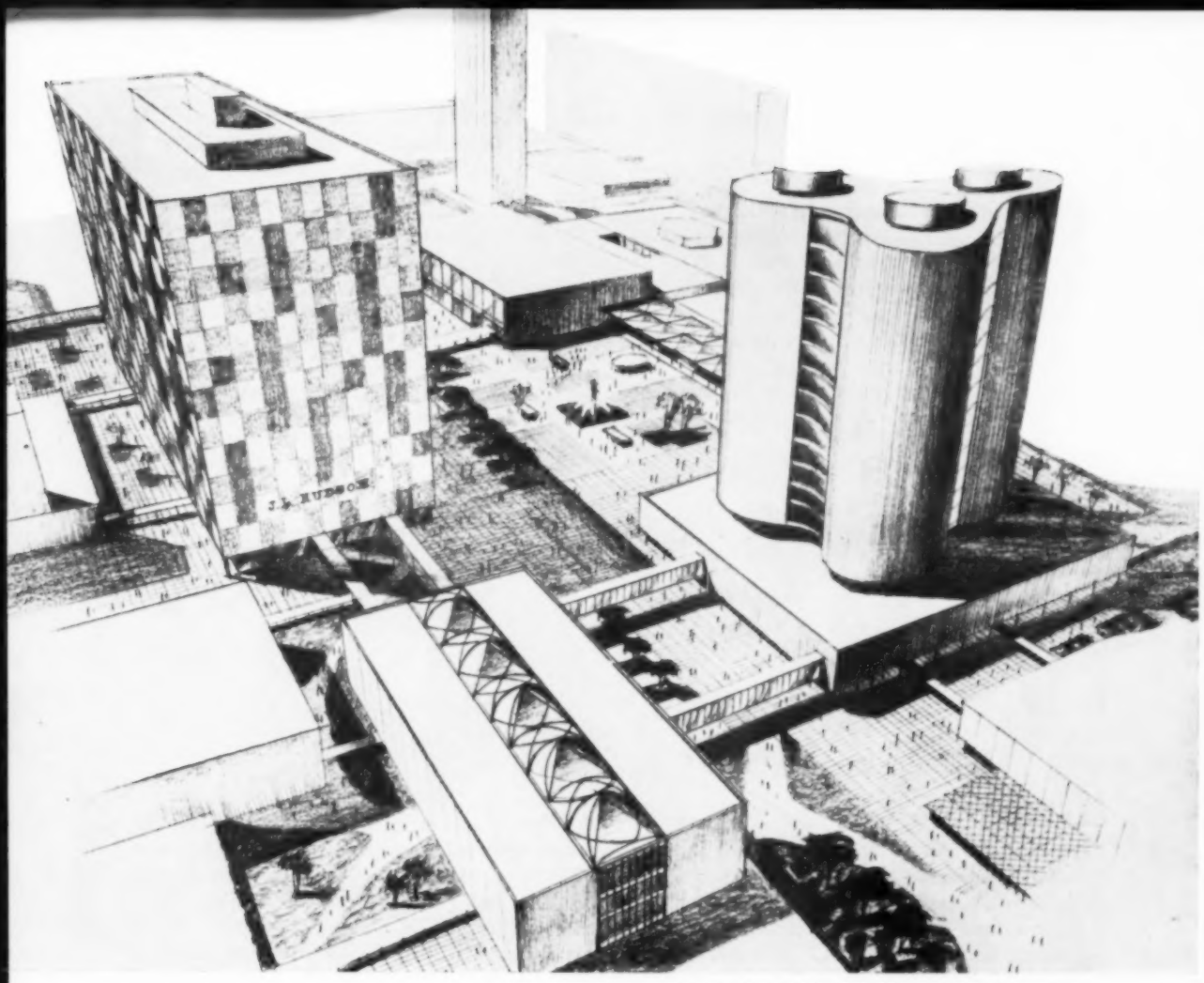


Chart 3

Monorail system and its terminal with connection to an undergound loop system in the downtown CBD.

View toward the new department store tower from Hudson's.



Center plaza of the "Mainland" shopping center.

rapid transportation system. Switching of "capsules" from one level to another takes place through hydraulic or electric lifts, which are then connected to the rail above.

c Underground CBD terminal points (Chart 3) become pedestrian distribution centers. Here the same "capsule" is lowered down and becomes again self-propelled.

d Final destination is reached on foot, via moving pedestrian walks.

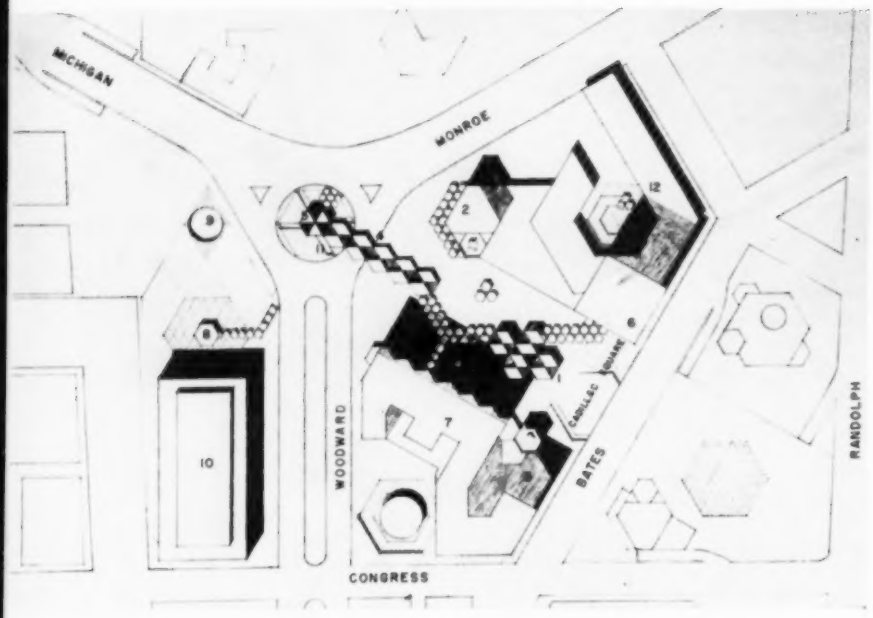
People must be stimulated to shop downtown. The area, therefore, must offer new experiences in shopping environments. A radical departure from the present day pattern is offered in a twenty-year development plan. Surveys of existing mercantile buildings revealed obsolescence of structure and merchandising concepts. Some buildings are only partially occupied. Some should be demolished immediately because of lack of safety standards; others should be replaced as a part of the new overall plan. This solution suggests the building of possibly a new Hudson's Store to create a significant "orientation land mark" for the whole area. The present Hudson Store may serve different and less important functions.

The entire solution hinges around a new "Town Square" of shopping, surrounded by the natural and the mechanical, landscaped areas, fountains and gardens, news stands, benches, cafes, moving walks and seats, elevated heliports, parking garages and terminals for the rapid transit system. The airconditioned concourse type structure containing many small shops also may become a part of this solution.

Whether this scheme, proposed by the group, will remain a dream or become a reality will depend on the farsightedness of the people of Detroit, the city planners, the architects, the economists and the financiers. The "Mainland Shopping Center" could be a reality in our lifetime.

D

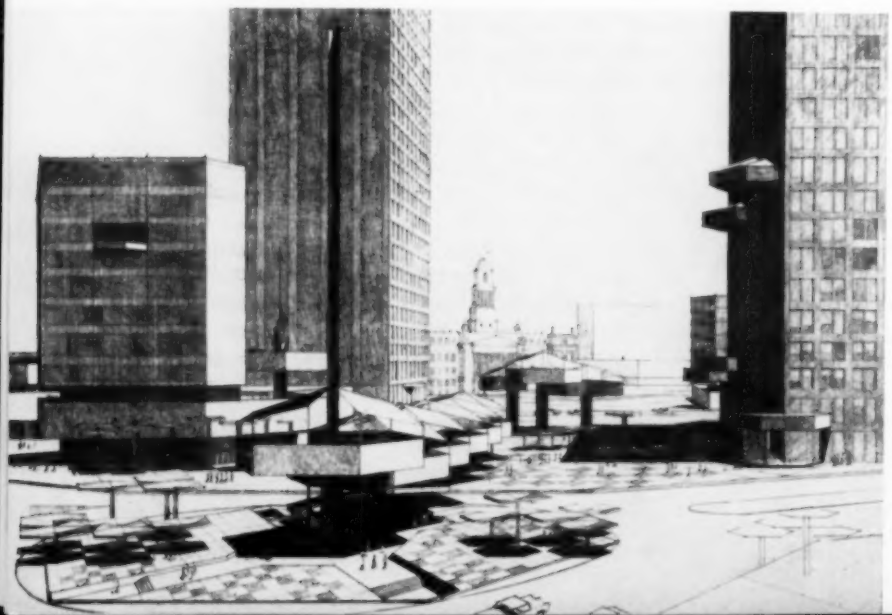
Charles C. Higbie



1 Elevated restaurant
2 New office building
3 Theater
4 Bridge over traffic including small shops and historical displays relating to Cadillac Square and Detroit
5 Elevated platform at intersection of streets
6 Existing Cadillac Tower
7 Existing old National Bank Building
8 Information center
9 Pool
10 Existing new National Bank Building
11 Underpass from island under Michigan, Woodward and Monroe
12 New commercial retail development

CADILLAC SQUARE

The Cadillac Square area, surrounded by the financial, commercial, and governmental functions of the city, will probably continue to function as at present. Now including approximately one million square feet of office space and 225,000 square feet of commercial facilities, it is proposed that this area be changed little in the immediate future. The characteristics of the area which required study were (1) the present confusion of automobile, bus, and pedestrian traffic, (2) the absence of structures needed to define the spaces, (3) additional retail commercial facilities, and (4) new restaurants and other service facilities. The elements suggested in the study include the proposed removal of the present city hall and other obsolete buildings facing the square on the north and south; the placement of an elevated platform at the intersection of Woodward, Monroe, and Michigan Avenues providing a downtown focus for each of these arteries; an elevated arcade providing space for small shops and pedestrian access to the heart of the square by bridging bus and automobile traffic. A central platform upon which is located a restaurant completes the organization of the area.



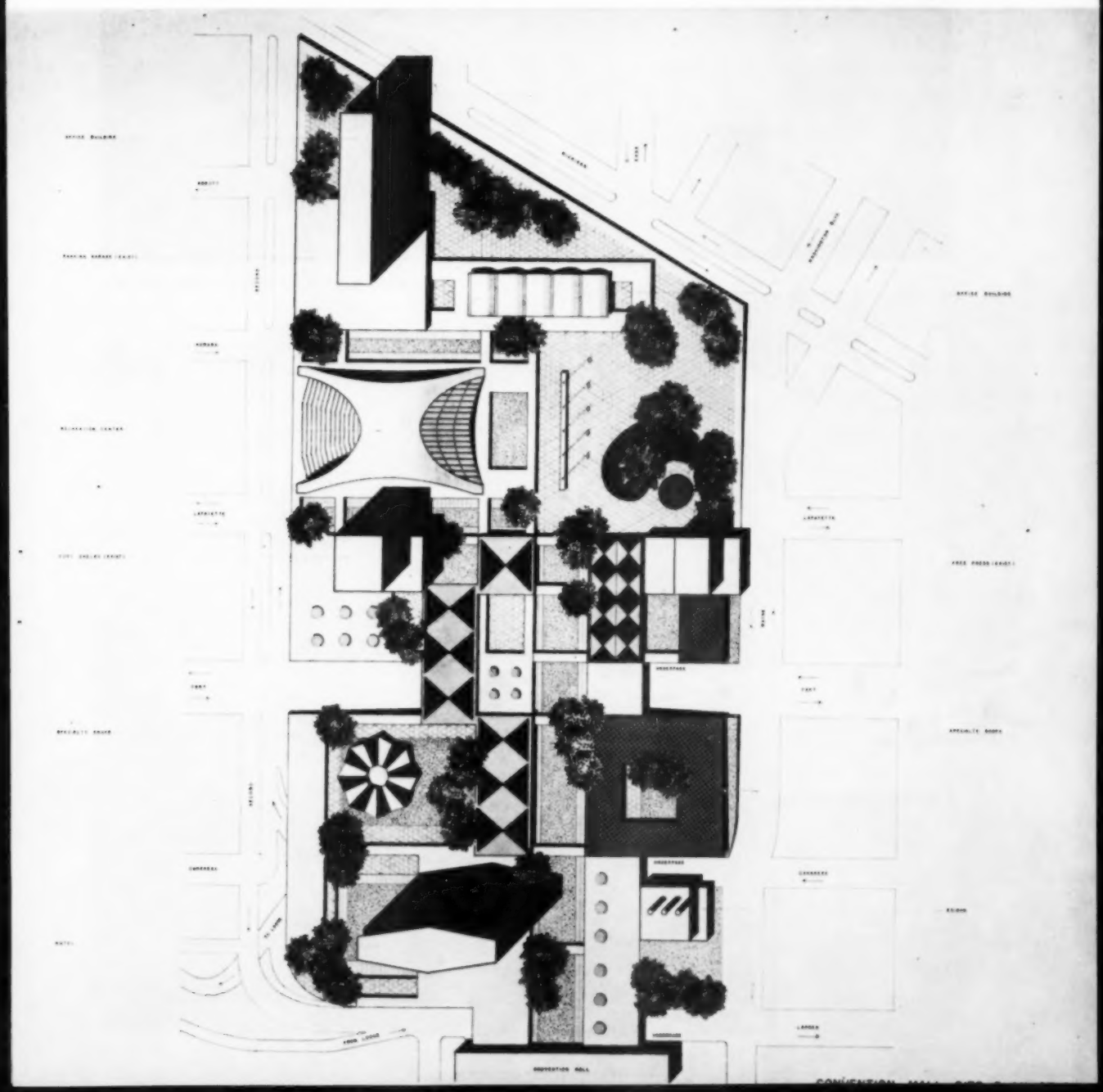
East view.

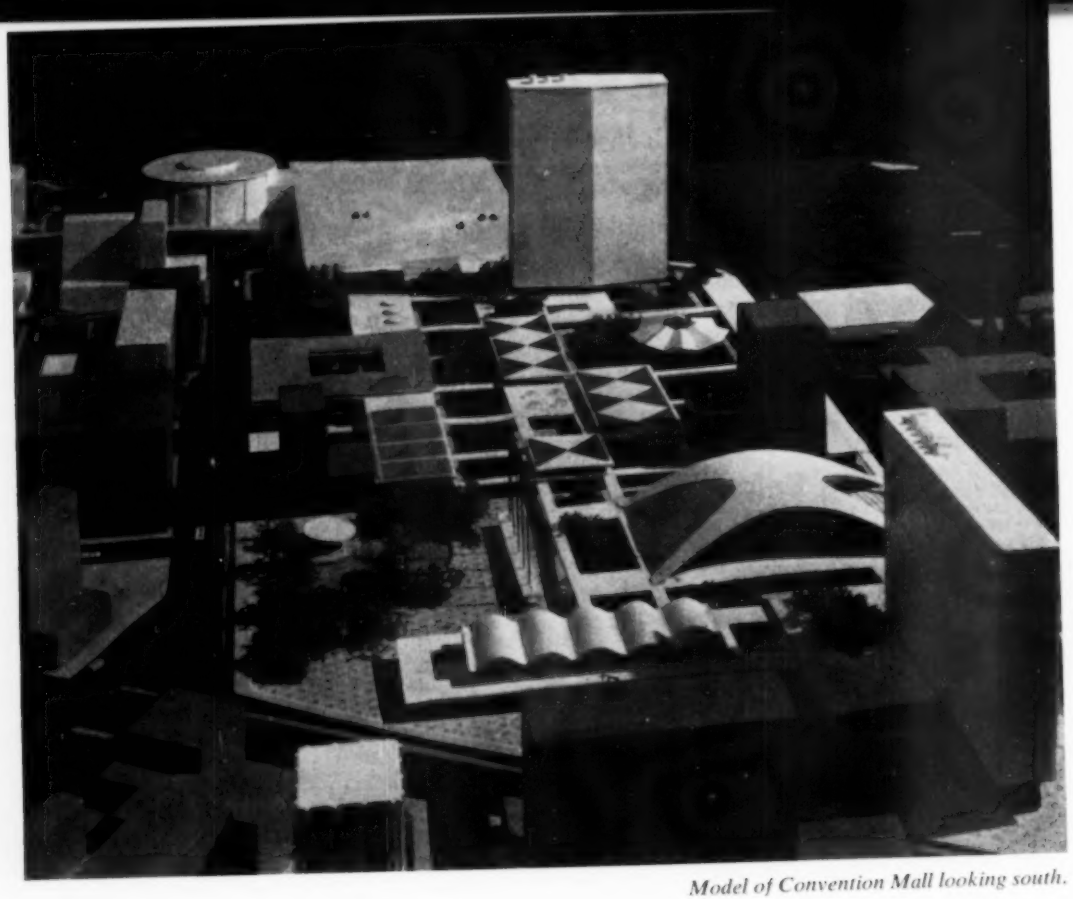
Offices of Harley, Ellington & Day, Inc., Architects & Engineers represented by:
Malcolm R. Stirton, William Ku

The proposed Convention Mall is a part of the redevelopment of the CBD. It is designed not only to meet today's requirements but also tomorrow's problems. The project contains a hotel, specialty shops, restaurant, recreation center and office buildings. An underground parking area is also planned for the use of the whole project. The Mall is planned to be located between the Convention Hall and Washington Boulevard, in order to create a green strip which will tie together the Boulevard and Convention Hall.

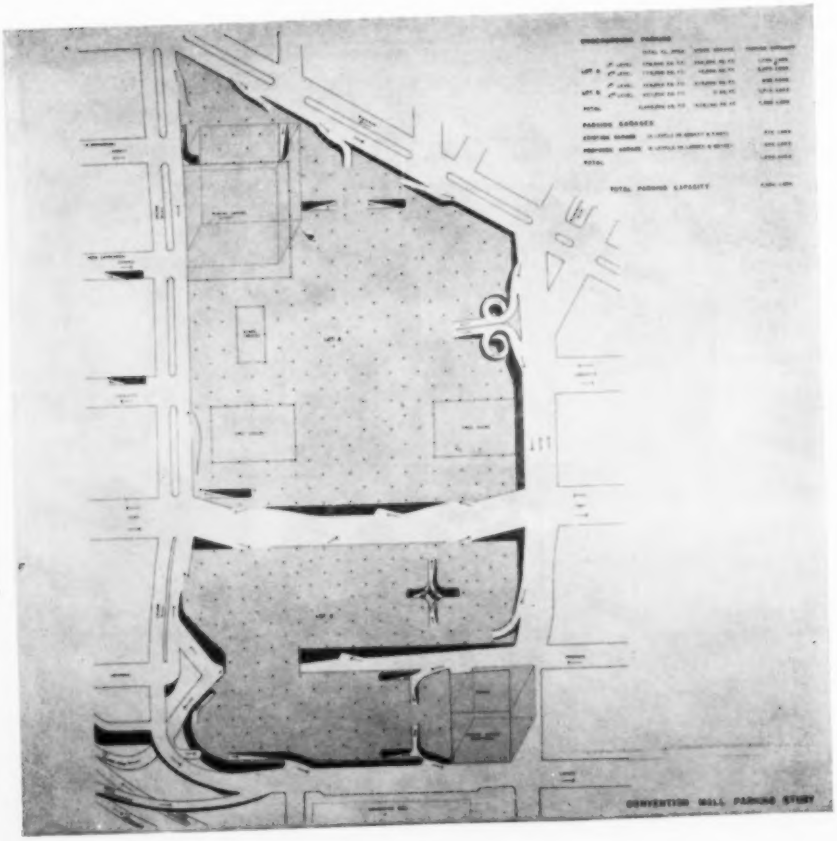
It is felt that the Mall, which will be limited to pedestrian traffic, will provide a pleasant environment for the visitor to the Convention Hall. Here, the individual will be able to enjoy being out-of-doors, in contrast to the indoor atmosphere of the Convention Hall, and use the light shopping, dining, and recreational facilities available.

Plan of Convention Mall.





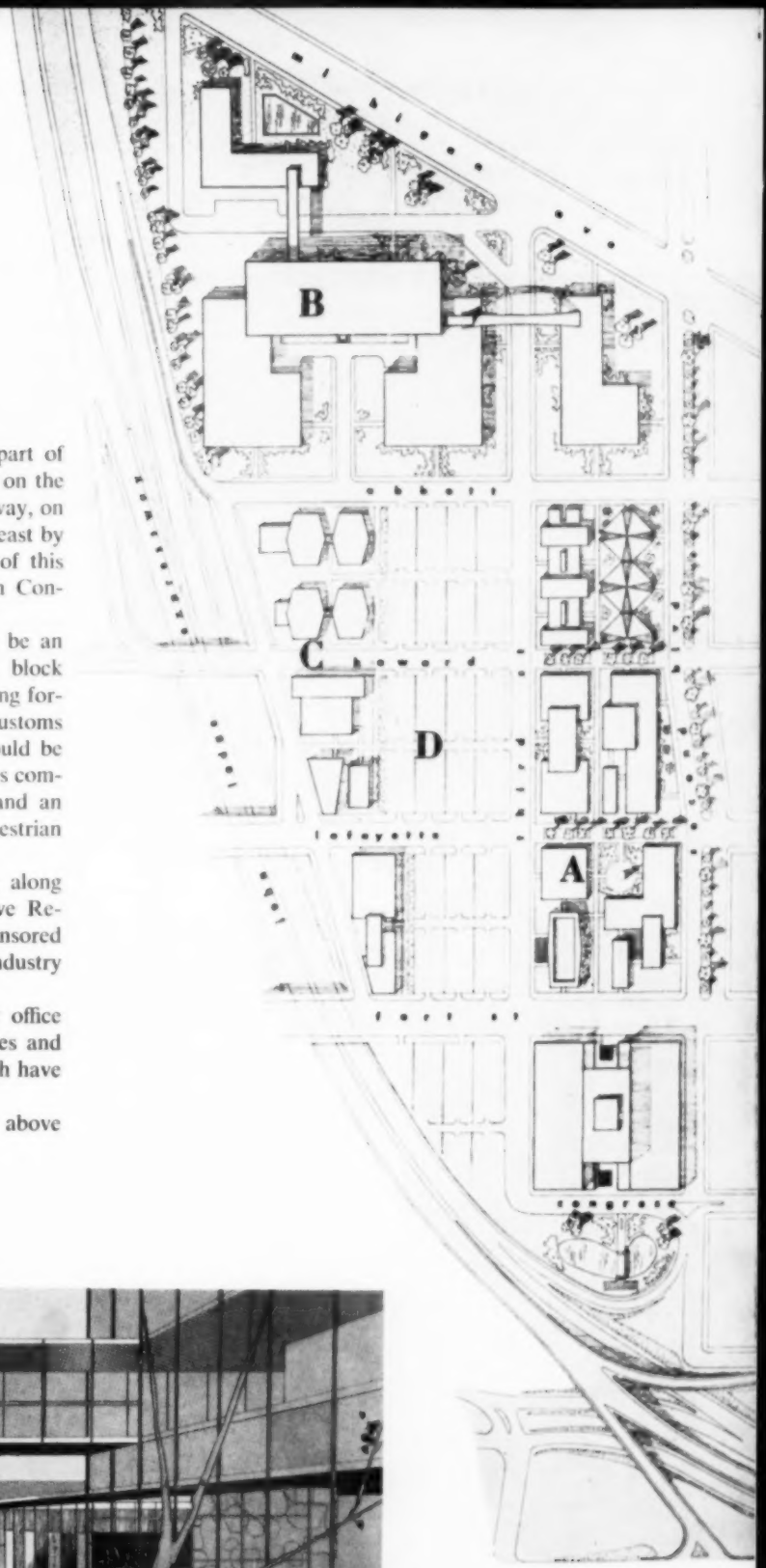
Model of Convention Mall looking south.



Underground parking.

F

Heidi Fujii, R. E. Wiese



INTERNATIONAL CENTER

The area under consideration for this part of Central Business District study is bounded on the west and south by the John Lodge Expressway, on the north by Michigan Avenue and on the east by Second Avenue. Immediately to the east of this area is the Convention Mall, leading from Convention Hall north to Grand Circus Park.

Areas designated by the letter A are to be an International Center. The southernmost block would be a multi-story office building housing foreign consulates and the United States Customs Service. The remaining part of area A would be a gay and colorful grouping of low structures comprising foreign shops, restaurants, stores and an international information center. Only pedestrian traffic would be permitted within this area.

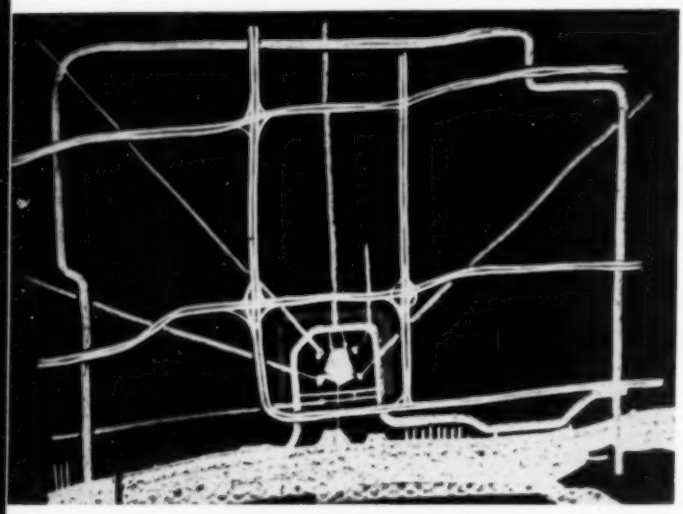
Areas designated by the letter B lying along Michigan Avenue would be an Automotive Research Center. This Center would be sponsored cooperatively by the entire automobile industry for the advancement of transportation.

Area C consists of three- or four-story office buildings. These would house the executives and administrative personnel of companies which have their manufacturing facilities elsewhere.

Area D provides parking for all the above groupings.

Typical mall view.

G | **William J. Johnson,** Landscape Architect, of Eichstedt-Johnson
David B. Spaulding
Ulrich Weil of Weil-Cohan Associates



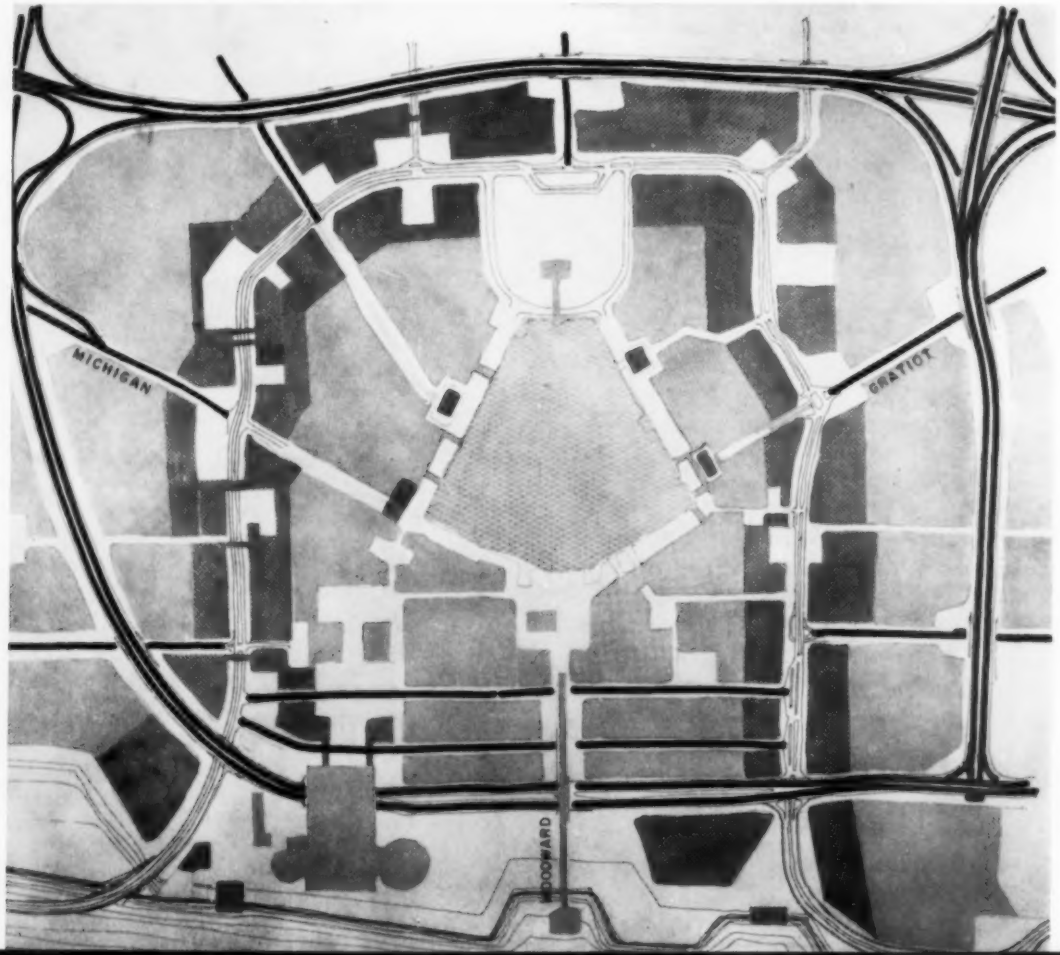
Scheme of ring road in relation to surrounding area.

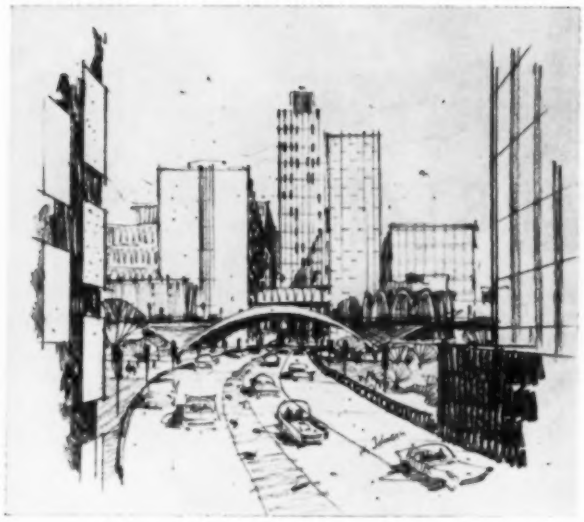
In the early stages of the project, this group was chiefly interested in the effect of the Civic Center as an open space and how it should connect with the Woodward Mall. Concern was expressed for the major open spaces in the entire CBD and how this space should be organized. Since the Civic Center was already essentially planned, the group became interested in the more challenging aspect of designing open space for the entire CBD.

The very nature of open space is one of strong contrast with dense urban space, and should be controlled. Because of this quality of strong contrast, openness can be used to advantage as an element of organization for the CBD.

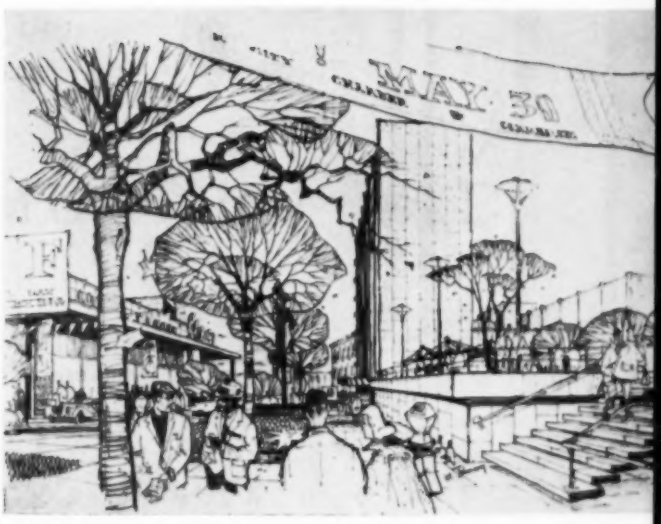
The group assumed that it is important for the person on the street to know with clarity where he is located in the urban scene. This depends a great deal upon his ability to take position checks with

Study of ring road development.





View of ring road.



Mall adjacent to ring road.

an over-all visual tie. It was felt that this open space could possibly be fitted in a lineal form throughout the CBD, much as the Grand Canal in Venice ties together a near chaos of sidewalks and building masses. A natural location for such a device seemed to be the secondary traffic route which has already been established by the City Plan Commission. Automobile traffic as well as pedestrian traffic could identify itself with such an orienting device. Thus, traffic of quite some intensity could proceed along this drive as part of the CBD traffic circulation pattern, similar to the German "ringstrasse," but of much greater scale. Here is a chance to change grades, curve the roadways and to create an atmosphere of marvelous contrast with the urban scene even as it penetrates through it.

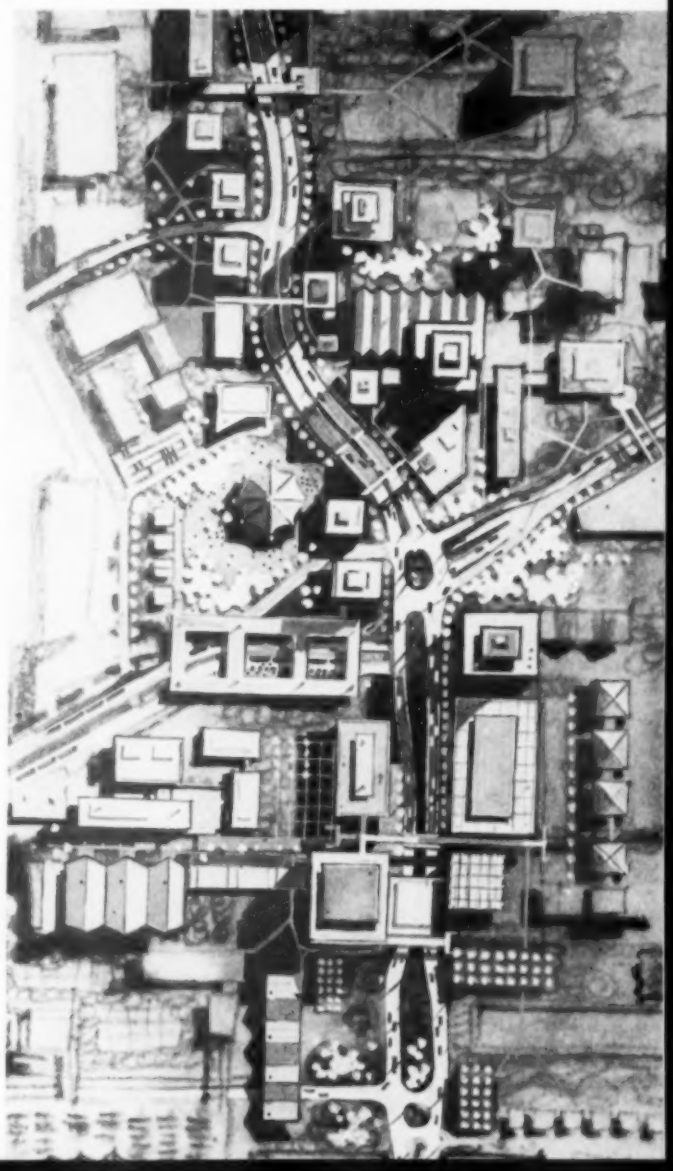
In the process of making this study, the group determined certain directions and limitations in order to arrive at the qualities that Detroit's CBD should possess, as follows:

1 The human being is the scale constant, considering here the visual and emotional perception of the person as he moves through a sequence of contrasting spaces and views.

2 Inherent qualities of Detroit should be evaluated and conserved where possible, such as existing patterns of traffic movement, individual buildings, the density of the existing core of buildings.

3 Consideration should be given to the sequence and order of major open spaces, i.e., alternating the concentrations of structure and open areas in a pleasant change of pace, building up the elements of surprise, offsetting periods of intense activity and stimulus with periods of quiet atmosphere.

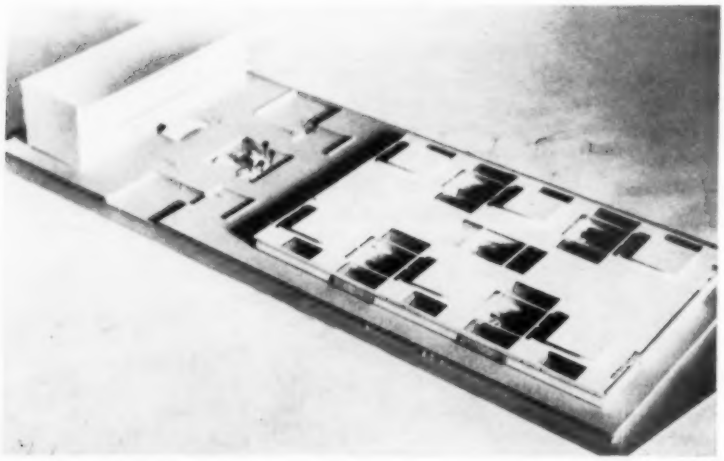
Detail study of ring road at Gratiot Avenue.

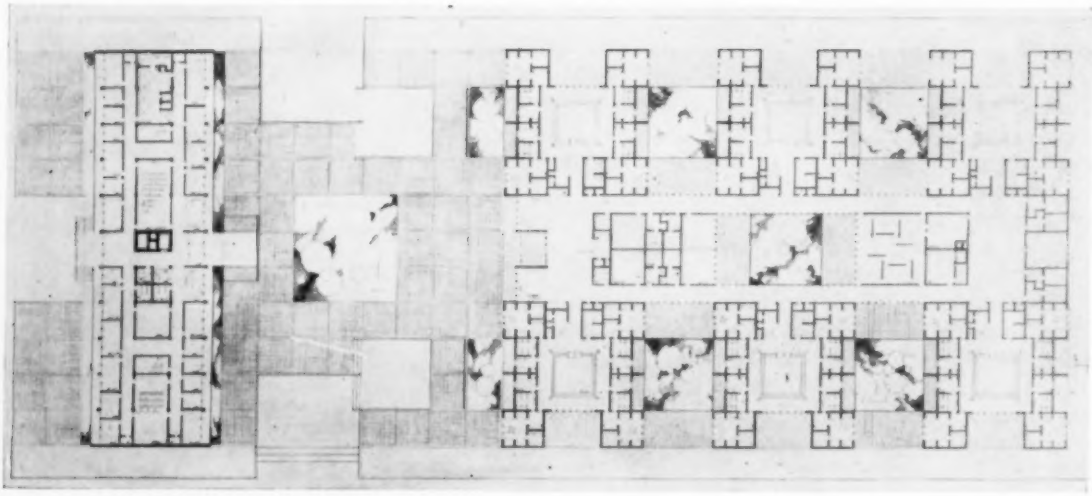


THE 1959 ROME PRIZES

The Rome Prizes are no longer awarded on the

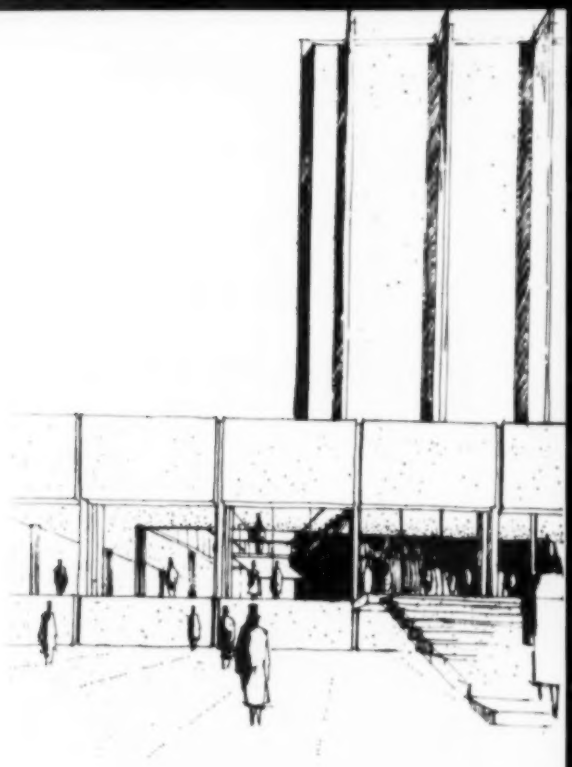
Competitors submit brochures displaying their best work done over a period of years in





basis of a single design competition.

both school and office.



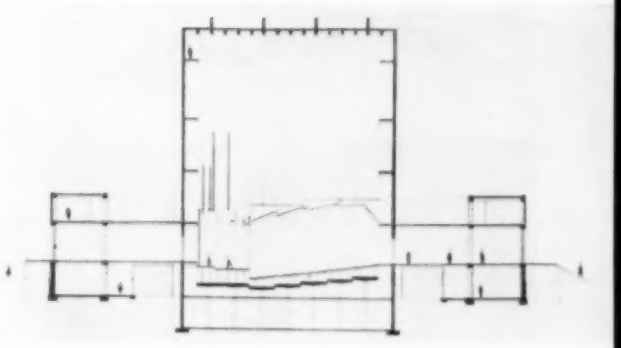
Two fellows were chosen this year:

JOHN JAY STONEHILL,

of New York City, Dartmouth College, B.A. 1955; Yale University, B. of Arch. 1959.

THEODORE JOHN MUSHO,

of Yonkers, New York, University of Cincinnati, B.S. in Arch. 1958; M.I.T., M. of Arch. 1959.



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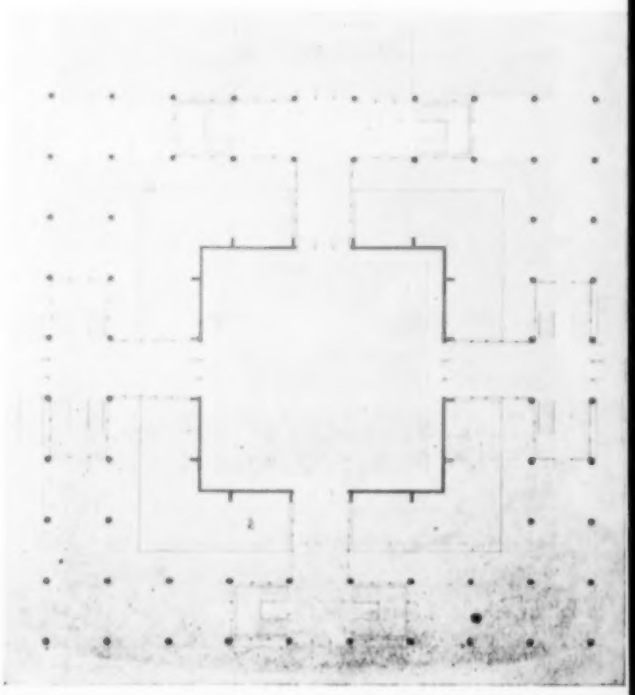
A Psychiatric Hospital for New Haven, Conn. Third-year Commend project by John Jay Stonehill. Bi-nuclear rehabilitation and treatment plan. Open nursing units permit sequence of growth spaces: one-person room to four-person room to twenty-person nursing unit to forty-person courtyard to large public and patient spaces to city spaces. Treatment building for in- and out-patients and administrative functions.



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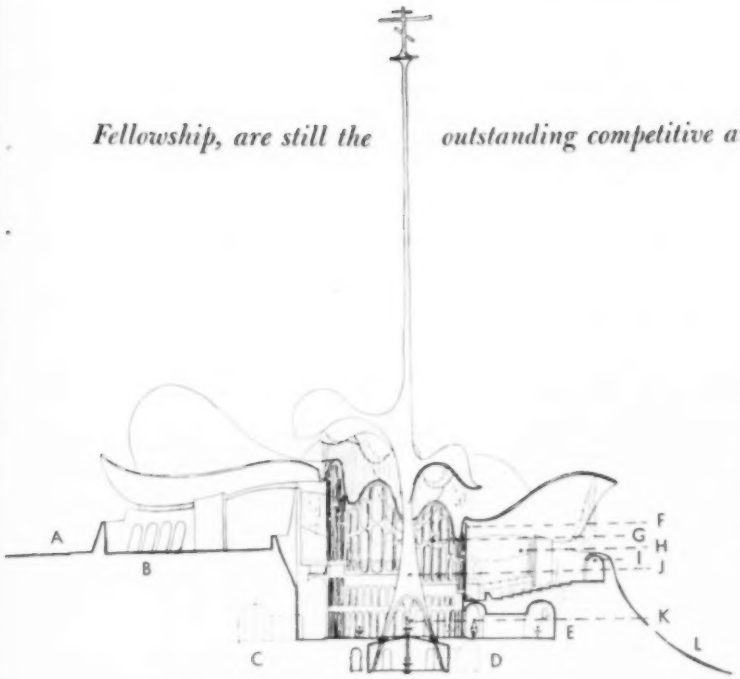
Experimental Theater for Yale University Third-year Commend project by John Jay Stonehill. Central flexible performance core with encircling related teaching and production functions.

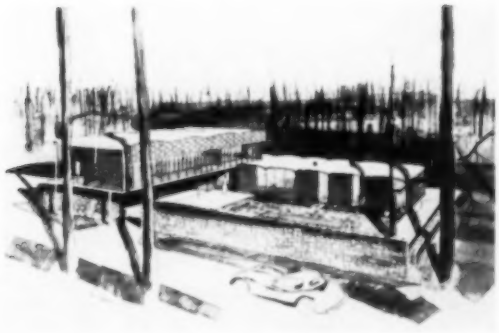
THE 1959 ROME PRIZES

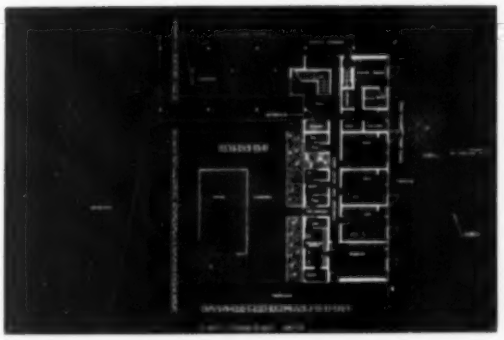
The Rome Prize and the Paris Prize, now known as the Lloyd Warren

Fellowship, are still the outstanding competitive awards available to students of architecture.



A	Elevation 280 feet	G	Sanctuary
B	Main Entrance	H	Nave
C	Sacristy	I	Entrance Tunnel
D	Baptism	J	Baldachino—Roof—Spire
E	Chapels	K	High Altar
F	Ikonostasis	L	Elevation 240 feet





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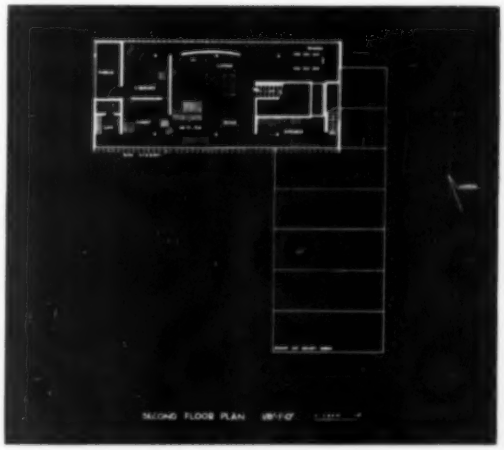
A Greek Rite Catholic Church Undergraduate degree thesis by Theodore John Musho. Design developed for an actual site in Yonkers, N. Y.



A Residence Fourth-year Design problem by Theodore John Musho. Residence for a lawyer and his wife and three children. Emphasis on separation of private and social areas.

▶

The Architect and the Law

by Clinton H. Cowgill, FAIA, and Andrew Wilson Green

► PROFESSOR, you are making us suspicious of people," objected a keen-minded student during a discussion of the law of building. I tried to explain that a suspicious or cynical attitude does not necessarily go with an awareness of danger, and architects should have knowledge of possible misdeeds by those with whom they may have business relations.

How many students of architecture exhibit sufficient interest in courses in this and other phases of architectural practice even to object? In how many schools are such courses taught by architects who are sufficiently aware of problems encountered in practice to enable them to challenge the student's interest?

The faculties of architectural schools proclaim that their objective is to prepare students for practice—rather than simply to train designers—yet how many of the younger teachers (who often have the greatest influence on the students) really understand what architectural practice is like? A reappraisal of the curriculum—not just a shuffling of courses and credits, but a realistic consideration of relative emphasis—is needed periodically. In many a school a reappraisal by a well informed faculty should result in placing a course in architectural practice in the hands of the wisest, most experienced, and most dynamic teacher available.

The study of law, as well as of ethics, does involve consideration of right and wrong, and the emphasis is often negative. When approached positively, on the other hand, the study of law may even lead to consideration of how to do wrong legally. Architectural students and their elders should learn how to take positive action which is right and which will avoid legal pitfalls, both for themselves and their clients.

Practitioners as well as students are inclined to assume that whoever does right need not to be concerned with the law. The awakening may not occur until one hears of a misfortune suffered by a fellow architect—or even until one experiences litigation first hand. Such misfortunes may result from misdeeds of others or the unintentional misdeeds of architects.

Shunning the wrong-doing which is recognized intuitively *is* generally a safe way to avoid difficulties with *criminal* law. In this category, one may be prosecuted for the misdemeanor of practicing or offering to practice without being duly registered. For guidance in interstate practice (or one's first registration) the National Council of Architectural Registration Boards and the local registration board should be consulted. While an architect may be prosecuted for criminal negligence in the case of a serious accident, it is more likely that for any failure due to faulty design, he would have his registration revoked or be sued for damages.

Architects and Lawyers

While being careful in performing his professional function, an architect must also make sure that he does not encroach upon other professional fields—notably that of law. Overlapping of these two professions is most likely to occur in connection with the preparation of agreements between the owner and the contractor. When all concerned are friendly, it is difficult for an architect to understand why the owner's attorney should not offer unbiased advice. However, remote as it may be, a possibility usually exists that the interests of owner, contractor and architect may become at variance, and all should understand at the outset whom the attorney does represent. For important agreements, therefore, both the contractor and the architect, as well as the owner, should be represented by their own lawyers. A lawyer may not ethically take more than one side of a controversy, or represent more than one party with potentially antagonistic interests, and where serious legal problems are involved, some attorneys will insist that all parties be represented by competent legal counsel.

It frequently happens that an architect is called upon to advise an owner upon other matters having a legal background. In general, he should avoid giving strictly legal advice except upon routine problems in connection with simple projects of moderate size. This may include advice concerning *building laws, zoning laws,* and *arbitration laws.* Legal matters are involved, also, in many of the articles of the General Conditions. These the architect may be called upon to explain and possibly to modify. In addition, the architect should be familiar with acceptable forms of release of waiver of mechanics' liens. Under some circumstances an architect may relay the advice of his attorney to the owner. In such a case the architect's lawyer is in the position of assisting the architect in his service to the owner, and all concerned should understand that the architect's attorney does not *represent* the *owner.*

The Construction Contract

The preparation of a contract for the construction of a building normally involves both architects and lawyers. Legal advice has been used in the preparation of the various standard AIA forms of agreement and the General Conditions of the Contract. The execution of the agreement (the filling out of the blanks of a standard form) is generally recognized as a part of the architect's normal service, although

Mr. Cowgill is well known to Institute members, his latest accomplishment being the editing and preparation of the new edition of the "Handbook of Architectural Practice." Mr. Green is a prominent attorney in Harrisburg, Pennsylvania.

many architects have these completed documents reviewed by a lawyer. The most important parts of the contract for the construction of a building, though, are the general conditions, the supplementary general conditions, the working drawings and specifications. These should be carefully phrased to be clear to the legal mind as well as the practical mind. Obviously the preparation of these documents is a major portion of the architect's normal service. Before accepting responsibility for the preparation of a construction contract,[1] the architect (through his lawyer) should examine the laws of the state in which the building is to be erected and should observe any non-conflicting laws in the state of residence of the client and the contractor.

Agreement with Client

In preparing his own agreement with a client, an architect is well advised to use one of the standard forms published by the Institute. These have been written with the advice of counsel, tested, and given attention by the best minds in the architectural profession with the intention of making them fair to all concerned. Preferably with the advice of a lawyer, they may be changed to fit special situations, and if new agreements are written, the standard forms may be used as a guide.

For small projects and when the architect and his client are personal friends, a formal agreement may appear inappropriate, but there should always be a complete understanding, and to avoid later misunderstanding due to the faultiness of human memory, the essentials of the agreement should be put in writing. This may be in the form of a letter. To avoid making the letter overlong, a copy of the Conditions of the Agreement from the standard form may be referred to and attached.

All Contracts

The following statements apply to all contracts.

In a few states agreements executed on Sunday are void. In all states, names of parties to a contract should be the same on all documents, and addresses should follow the names. Signatures should agree exactly with the names of parties as stated. In the case of a partnership, the signature of one partner after the name of the firm usually is sufficient. In many states, the names of all partners may be ascertained from public records. In the case of a corporation, the exact corporate name and the state of incorporation, which may be ascertained from public records, should be given. Other significant information may be found in public records, but corporations may keep much of their business operations secret. The corporate name should be repeated in the signature, followed by the signed name of the officer authorized to execute the contract, the corporate seal, and the attestation of the seal by the proper corporate officer, usually the Secretary. Sometimes with business corporations and always with public bodies, it should be determined that (1) the corporation is authorized by its charter to make the contract, (2) that proper action was taken by the Board of Directors, and (3) that the officers executing the contract were authorized to do so. The statutory power of a public body to make the contract should always be determined.

It should be expected that the owner will refer all important legal documents to his attorney before signing them. If AIA standard forms for the contract between the owner and contractor are used without change, the contractor will usually not hesitate to sign, but if other forms are used or changes are substantial, it should be expected that he will seek the advice of his attorney.

An Architect's Liability

An architect's liability in his professional practice is governed by general principles of law applicable to everyone. He is responsible to perform his contractual commitments and to remedy his wrongful acts. His responsibility for the acts of others is governed by general principles of the law relating to agents and employees.

Although it may not specifically so state in the architect's contract with his client, the law will generally hold that the architect is responsible under his contract with the client to: (1) not lead his client to suppose that a proposed building can be built for a sum which is substantially less than its actual cost, (2) not promise delivery of contract documents or plans in advance of the time when the architect can reasonably expect to complete them, (3) prepare plans and specifications which are adequate for bidding and sufficiently complete and definite to enable the contractor to construct the building, (4) design a building reasonably able to fulfill its intended purpose, (5) adhere to instructions of his client (there being exceptions in some unusual instances), (6) comply with all building laws and regulations of the state and local authorities, and (7) give general administration to the construction of the building, using reasonable care and skill in the discovery and correction of defects, being fair with the contractor and diligent in checking accounts, and approving them for payment. In addition, the architect may in some circumstances be found liable under the law for failing to do these things without regard to his obligations under the contract.

In respect to an architect's liability outside of his contractual obligations, the architect should not forget that he can be held for his omissions as well as for his commissions, and that he can be held liable for his wrongs, which are committed unintentionally as well as intentionally. Unintentional acts or omissions for which a person can be held responsible are called negligence by the law. Negligence is a broader term than mere neglect, because it includes things done, as well as not done, if they are done with inadequate care or skill.

In performing as an architect, misunderstanding which may lead

[1]For detailed instructions, see AIA documents A-102 and B-354.

to litigation may be avoided by keeping adequate records,[2] such as the following:

1 Memoranda of all conferences, with dates,

2 Names and addresses of all those concerned with a project,

3 Memoranda of data furnished by the client (possibly a complete program),

4 Date of submission and amount of cost estimate of each design submitted, and date of each approval by the client,

5 Proposed and actual completion dates of each class of working drawings,

6 Architect's budget and final cost of each phase of his service,

7 Date of approval of contract documents by each reviewing agency,

8 Final construction estimate,

9 Amounts of all bids and subbids,

10 Names and addresses of all contractors,

11 Dates of issuance and return of construction documents,

12 Dates of filing of copies of construction documents for owner, and with building officials,

13 Dates of approval of surety, acceptance of certificates of insurance, progress schedule, tests, and schedule of values,

14 Dates of checking and approval of shop drawings,

15 Dates and amounts of certificates for payment and change orders,

16 Summaries of reports from project representative and project inspector,

17 Dates of architect's approvals and rejections,

18 Dates of substantial completion, semifinal and final inspections, cerficates of completion and final certificate,

19 Final construction cost, and

20 Summary of the architect's expense.

Photographs taken before, during, and after completion of construction are often useful.

Naturally, one of the things which frightens an architect is his responsibility for the work of his associates, partners and employees. Generally speaking, the architect is responsible for their work because he agreed to be responsible for it in his contract with the owner. Under his contract, the architect may be responsible to the owner regardless of how careful the individual architect was to see to it that his associates, partners and employees performed their work properly. However, such contractual liability runs only to the owner and is not as frightening as the noncontractual liability the architect may incur for the negligence of his associates, partners and employees to an undetermined public.

An architect is responsible in respect to his employees (including consultants) to the general public, to see to it (1) that he has given them adequate supervision to see to it that they have properly performed their duties, and (2) that he has chosen his employees with care so that they are qualified to perform the responsibilities placed upon them. Where the architect is unable to supervise the technical work of some of his employees because they are working in a field with which he is not familiar, the architect can ordinarily avoid personal liability for their work if he has taken due care in their selection and supervision, but this probably will not be the case if the fault occurred in an area where every architect is supposed to be reasonably proficient, such as simple structures.

As for partners, the general rule is that a partner is fully responsible for the acts of his partners in the partnership practice, without regard to his own lack of personal participation or knowledge of his partner's acts. This seems to be a harsh rule, and some have sought to avoid it by provisions in the partnership agreements. However, such provisions in the partnership agreement can only regulate the liability of the partners as between themselves. Another device for limiting liability for acts of partners is incorporation in those states where it is permitted. Stockholders have no liability to a corporation's creditors. However, the principal who has personal charge of the work cannot escape liability if it is negligently performed. Incorporation, therefore, should not be looked upon as a device for avoiding professional liability.

For a discussion of the pros and cons of incorporation for professional practice, see AIA *Journal* for May 1958, page 221, "What Kind of an Office?" This is perhaps a good occasion to say that the choice of the form of business is a matter about which architects should consult with competent attorneys. Attorneys should be called upon to draft partnership agreements, or articles of incorporation, and to recommend the proper provisions to regulate liability among the partners or associates, and in respect to their obligations to the public, and to the respective tax advantages of alternative forms of doing business. No architectural firm should practice without having the relations between the associates put in writing by a competent attorney.

Some decisions have gone beyond the traditional concept of reasonable care and skill, the courts assuming that for any damage suffered, someone must be held liable. In cases in which architects have been proven to be blameless, they have been put to great expense in defending themselves. Perhaps the profession should join such other groups as physicians and surgeons, in appealing unjust decisions. In the meantime, protection is available through Professional Liability Insurance. But the best way to avoid legal difficulties is to be competent, intelligent and diligent. To be intelligent, one must have some knowledge of the law. No student of architecture should be graduated and no candidate should be registered as an architect without demonstrating such knowledge. An architect with experience in legal matters may not need to consult his attorney as frequently as is advised herein, but he knows he can proceed safely without advice.

[2] For an example of an Architect's Project Record book, see the AIA Handbook of Architectural Practice, pages III-10.04 to III-10.30

FOR INSTANCE—

Handling Claims for Damages

BY WILLIAM STANLEY PARKER, FAIA, *Consultant to the Institute on Contract Procedure*

► When the Institute undertook in 1914 to revise the First Edition of the General Conditions, published in 1911, it appointed as Chairman of the Committee on Contracts a recent President, Frank Miles Day, noted for the character of his contract documents. The Institute had been working with representatives of the National Association of Builders' Exchanges and arranged for committees of the two organizations to work together in developing the new set of General Conditions.

The Institute's Committee had available the advice of the Institute's counsel, Louis B. Runk. The Contractors' Committee engaged the services of William B. King, an able Washington attorney, who saw eye to eye with Mr. Day regarding the basis on which revisions should be made. At that time most contracts were drafted under the general supervision of the Owner's lawyer and tended to give the Owner's interest first consideration with many blanket clauses placing full responsibility on the Contractor.

Under the firm guidance of Mr. Day and Mr. King, the committees agreed that the General Conditions should be drafted with fairness to both parties, with the elimination of all "hold harmless" clauses and other blanket clauses that placed the Contractor at an unfair disadvantage.

In all revisions in subsequent editions this basic policy has been adhered to and the national organizations of Contractors and Subcontractors have endorsed the General Conditions as issued by the Institute.

Article 31, Damages, has been the only provision in which there has ever been claimed to be a "Contractual Agreement" that might affect the application of a liability insurance policy. Such policies protect against losses due to *legal liabilities* but expressly refuse to protect against losses resulting from voluntarily accepted "Contractual Agreements," such as the proverbial "hold harmless" clauses of the old days. This has now been corrected in the new Seventh Edition and it will be well for Architects to understand how this is accomplished.

In the Sixth Edition Article 31 provided that "if either party to the Contract should suffer damage in any manner because of any wrongful act or neglect of the other party or of any one employed by him, *then he shall be reimbursed by the other party for such damage*, etc." There were differences of opinion among insurance men as to whether this provision did constitute a type of contractual agreement that could affect the validity of the liability insurance policies.

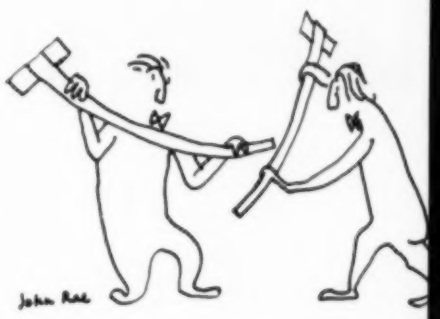
Most of the insurance men said that it might, but that they would not so consider it in relation to policies issued by their companies. It came to be felt that the point should be clarified and to that end, in the Sixth Edition, the following phrase was added to Article 27, Contractor's Liability Insurance:

> "This insurance need not cover any liability imposed by Article 31 of these General Conditions."

The Seventh Edition provides a more satisfactory solution of this doubtful point by a complete rewording of Article 31 making it define merely the procedure by which claims for damages should be adjusted. In the process two provisions of the Sixth Edition Article have been transferred to more appropriate Articles as follows:

The provision placing on the Owner responsibility for any "loss of use of any of his existing property due to fire or otherwise, however caused," has now been inserted as a part of Article 29, Fire Insurance.

The final paragraph relieving the Contractor of "responsibility for damages to the work due to causes



beyond the control of and without fault or negligence of the Contractor" has now been inserted in Article 12, Protection of Work and Property.

These two provisions are now more logically placed and Article 31 is greatly simplified and the doubtful interpretation of its earlier wording has been eliminated. Also the provision in Article 27 quoted above has been deleted due to the revised wording of Article 31. ◄

Operation School of Architecture

BY SANTIAGO IGLESIAS, JR., AIA

► "Señores, amigos, colegas arquitectos de Estados Unidos," to all of you a big handshake and a loud "Hello." To start with this preamble in this very serious *Journal* of The American Institute of Architects may look unusual. But that is just the way we feel. Moreover, in this American territory—under American influence since the Treaty of Paris, when Spain ceded Puerto Rico to the great American nation—about four hundred years of Spanish heritage are now blended with American "Martinis"—as one of your columnists writes now and then in the *Journal*.

"Operation School of Architecture" started around 1947, when former Dean Arnaud of Columbia University was invited by Chancellor Jaime Benítez, of the University of Puerto Rico, to come to study and report to him about the feasibility of establishing a School of Architecture. This first report was negative because of the prevailing economic situation and lack of interest among the architects at that time.

This decision was not a stepping stone towards future studies. Perserverance in this matter finally won as we may explain further.

During the Congresses of the Pan American Union of Architects, held successively in Lima, Buenos Aires, Mexico City, Caracas, Habana, Santo Domingo and Panamá, resolutions were unanimously approved to establish a School of Architecture in Puerto Rico. This happened in South America and Central America. Subsequently in the USA at the AIA conventions held in Los Angeles, Washington, and Cleveland, the American architects approved similar resolutions.

After the Washington convention, President Leon Chatelain and Executive Director Edmund R. Purves decided to come to Puerto Rico. This was a decisive visit because the Governor, the Chancellor and legislative leaders showed interest in approving an enabling bill. Architects Chatelain and Purves and their entourage and local architects paid a visit to Governor Muñoz Marín. He gave the green light to present a bill in the Legislature. The bill was finally approved and the Chancellor appointed a local committee of architects, deans and other persons interested in the School of Architecture.

The climax of this "Operation School of Architecture" was when Chancellor Benítez invited one of the most distinguished groups of scholars and architects of the AIA, presided over by President John N. Richards, FAIA, to visit Puerto Rico and render a report to him. The work of the committee was highly commendable and successful. Of course, some Puerto Rican rum and sodas and even Martinis were enjoyed at various social affairs.

Also invited by the Chancellor was Dean José Luis Sert of Harvard who was to render a report on the same matter.

By this time, I guess both reports will be ready, so that the Committee appointed by the Chancellor can make final recommendations to the Legislature and finally to the Governor for the final goal, the establishing of the School of Architecture of Puerto Rico. ◄

On their visit to Puerto Rico shown below are (front row) Iglesias, Richards, Oliveras, Alvarado, (back row) Rogers, Cochran, Sanz, Feiss, Taylor, Pickens.

PUERTO RICO

From the Executive Director's Desk

► Occupying as I do, a relatively pleasant, if hazardous, position in the Washington arena and one with an unobstructed view, is a great privilege. My job permits me to become well acquainted, not only with our own profession and its organization, but also with the Federal government, the construction industry and the public. It is a position which brings intimate knowledge of one's fellowman, and thereby unless obtuseness, natural or assumed, sets in, the ensuing education is automatic and engrossing.

It is a stimulating privilege. Such stimulation should be controlled for it incites the autobiographical urge which, if not checked, becomes a compulsion more dangerous and devastating than overeating or kleptomania. An autobiographical proposal suggested to my wife (who possesses considerably more objectivity than do I), evoked an instant if harsh, admonition that the result would be entertaining to no one but myself. There is no question but that I would find my autobiography highly entertaining. What other reason is there for writing one?

There is undeniable difficulty in evaluating one's contemporaries. This makes me wonder just how much attention we should pay to those figures who are projected upon our consciousness sometimes by good luck, sometimes by misfortune but alas, only too frequently through the engagement of agencies to exploit for a price their foibles, their personalities and their egos. A little research in esthetic fields reveals the extreme fallibility of contemporary evaluation.

A few years ago, a book appeared of reproductions of paintings acknowledged in the heyday of the French Academy as masterpieces of exalted accomplishment. No doubt the painters of those now mirth-provoking academic monstrosities wore frock-coats, sported ribbons in their lapels, strung initials after their names, like specimens in a zoo or a botanical garden. I suspect they were academically titled members of those societies which meet in pharisaical austerity to practice the jargon of their station, take pity on, or ignore the less fortunate and decorate one another with the gimcrackery of the elect.

It is fortunate for the rest of us, that throughout history, while the self-appointed cavort, architecture, science and philosophy progress—thanks to the ability and determination of those people, who, often laboring derided and ignored, suffer spiritually and sometimes physically and regard recognition as a mockery. I do not have to go too far back to recall the architectural names we were taught to adore. One in particular held himself out so successfully that he persuaded others to join in the chorus of adoration—a pundit whose works are now recognized as about as miserable a collection of unenlightened copies and borrowings from the past as ever retarded architectural progress.

On the whole, we are doing better for our students, for our young men. We have learned to be more self-critical, we are more honest; but we are, I am sure, bound to hand down to posterity along with our significant contributions, a certain quota of second-rate junk. In fact, alarming outcroppings are beginning to appear too far and too wide. Travelling about considerably, I become weary of spending all of my time on planes engrossed in the minutiae of Institute business, of writing speeches, of working over budgets, and of composing answers to angry letters, so I seek relief at airport newstands. I can no longer read certain kinds of fiction. "Historical novels" I find mostly irritating. There was a time when I enjoyed "whodunits," but two years spent actively in a "who done it" field as a chief of counter-intelligence working with police, F.B.I., Army, Navy, and Air Force, intelligence and counter-intelligence gave me a true picture of "who-done-itism" which has ruined forever my enjoyment of that form of literature. We hear that those who have not had the misfortune of active knowledge of crime find its fiction more soothing than alcohol. There are only a half-dozen basic jokes. All the millions of jokes are but modifications of the classic forms. The same is true of detective literature.

I started out to say simply that I enjoy the more reportorial type of literature, the more accurate and succinct. The subject matter may be diverse for I have an inquiring, though some say butterfly, mind. The other day finding myself about to enplane to the West Coast, I picked up a book about Madison Avenue. I was fascinated by this excellent exposé of the fortunes spent, the energy and glib minds devoted to the attempts to fashion public taste in order that coffers of the producers of whatnot may be kept full. What particularly interested me (leaving aside monetary envy) is the vast amount of money that is beguiled out of the pockets of corporations and people by the technicians to invest in research of a fascinating and shocking unimportance. $600,000 apiece is nothing to spend on so-called "surveys to discover what the average person wants or thinks he wants in the way of comfort, transportation, amusement, balms to his wounds or relief from his illnesses." It is equally fascinating to be informed how often and how expensive are the errors of this new science—for instance, the fantastic cost of preparation for the accouchement of the Ford Motor Company to deliver that monumental miscarriage, the Edsel car.

Occasionally on the encouraging side, American common sense asserts itself and tells off by its refusal to comply with the dictates broadcast by the assumed omniscient. Too often huge sums are spent to create a civilization which is specious and geared to the lowest common denominator of intelligence and capacity. Millions of dollars have been spent in the creation and development of TV technological advances of startling significance, whose end product is the introduction into the American household of an agent seemingly dedicated to the stultification of the American intellect. The machine is perfect. Its product is bilge.

One begins to wonder if our advertisers have not succeeded in feeding our youth an opiate more deadly than drugs.

Now one can speak frankly to architects, for architects are a superior breed, as among the requirements for admission to the profession are intellectual interest, ambition, energy and an inquiring and demanding nature. Admittedly, I am jealous, for at the Octagon we have struggled for years to raise a few dollars for design research, an essential to the welfare of people. We have been able to gather but a pitiful few dollars, whereas the wealthy corporations of America think nothing of spending millions of dollars on reasearch leading up to advertising campaigns—research which would be hilarious were it not so costly. For instance, a recent readership survey revealed this item of essential information, to wit, 1,300,000 families keep their copy of the *Saturday Evening Post* in the bathroom.

Probably the less difficult but more immediately financially rewarding careers attract the lazy mind not infrequently coupled with a good deal of nervous energy. It is this attraction which certainly has its impact on American success or the imitation of success. It was not until I read the book that I realized how greatly our civilization stands in danger of early decline. The specious standard and the less worthy objective is emphasized by those who, though professing to interest themselves in the welfare of their fellowman, are fundamentally intent on lining their pockets (scarcely a novel pursuit) as quickly and plentifully as possible regardless. The glorification of the unimportant is appalling. I am more conscious than ever of the responsibility of the architect as one of the few upon whom the survival of our civilization will depend. I thank my lucky stars that I can be counted in the profession.

Edmund N. Bacon

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NEWS FROM CHICAGO

(or Formula for a Vacation)

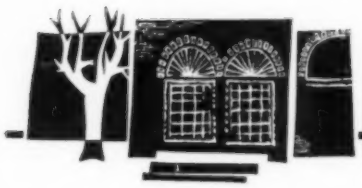
The topic momentarily is manifestly *Status,*
With architects exalted and upgraded,
—And it's gratis.

So tells the social scientist,
Statistically firm,
Advising each and every not to
Grovel like a worm.

Horatio Alger's stories still continue
On the beam,
For no one can obliterate the mass
American Dream.

The Licensed Architect of now
Is listed at the top;
So keep the treadmill moving, boys,
—You daren't hardly stop.

HELENCA



LIBRARY NOTES

THE ARCHITECT AS ARTIST

In pursuit of its policy of showing materials from its collections, the Library presently has on exhibit five prints by Gerald K. Geerlings, AIA. A selection from a larger group presented by the artist last spring, all are on architectural subjects. A previous exhibit of bookplates included several designed by architects, further evidence of an architect's capabilities as artist. The Library hopes that it may have an opportunity of showing the works of some of the other architects who have demonstrated their abilities as artists.

OFFICE LIBRARIES

There has recently been considerable interest expressed in office libraries by various architects asking for advice on methods of cataloging, classifying, etc. This indicates a healthy awareness of the value to the architectural office of an organized collection of books and other material. However published material specifically on the problems of an architect's office library is scanty. In an effort to secure more information on present practices, the writer would be pleased to hear from any office having a library. Two A-E librarians with whom he has recently been in touch have suggested the possibility of a mutual exchange on problems and solution.

YOUR AIA LIBRARY

Members with well-equipped office libraries may need to use the AIA Library only to supplement their collections. The member with a small practice or just starting should find the Library of real value to him. One new member writes "This is a very useful service to a man starting practice with limited resources." For the new member who may not be familiar with the library service it seems well to review them here.

Basically there are two services open to all corporate members—borrowing privileges and reference service. One may wonder how it is feasible to borrow at long range but members have found that it is practical and do so repeatedly. There is no published catalog of all the books in the Library, but it does issue an accession list at intervals which lists by subjects books recently added. So far twenty lists noting over 1600 titles have appeared. Future issues will be mailed regularly to any corporate member asking for them. Many members file these lists and then consult them when they need books on a particular subject. Often a member may know the title of a book he wishes and will write requesting it. If he does not know a specific title, he may write and ask the Library either to send two or three books on a subject or to list titles available. In either case the Library is glad to oblige. In this latter instance it is desirable that the member be as specific as possible since on many subjects there is a wealth of material. Conversely there are occasions when there is practically nothing specific on a subject in book form, such as a recent request for material on a county poor farm. In this instance material on homes for the aged was suggested as being roughly comparable.

To borrow books by mail a small charge of fifty cents for the first volume and twenty-five cents for each additional requested at the same time. It is desirable that this remittance be made in advance, but if not notification will be made of the amount due. Books are sent by library book rate, insured and should be returned the same way.

The other service offered by the Library is a reference service, supplying the answers to questions or indicating sources where information can be found. The Library is pleased to have your questions and will answer them as far as possible within its resources, or those readily available. It is not possible to conduct extensive research or to compile exhaustive bibliographies.

In regard to scope, the Library aims to have any book which might be needed by a practicing architect in the normal day-to-day routine. Many of these most architects will have, but since every architect obviously cannot expect to have every book that might reasonably be useful, the Library hopes to fill the gap. Further, the Library wishes to be reasonably complete insofar as publications on the history of American architecture are concerned. And, although not complete, the Library is able to assist on many out-of-the-way requests such as for material on Moorish pierced screens and Swiss chalets.

G. E. PETTENGILL

BOOK REVIEWS

Form and Space of Japanese Architecture. By Norman F. Carver, Jr. 200 pp. illus. 8″ x 10″ Tokyo: 1955: Shokokusha Publishing Co. $12.00. Text and captions in English and Japanese (trans. by Ryuichi Hamaguchi).

The author, a Yale graduate in architecture, spent two years in Japan in the armed services and two more years under a Fulbright scholarship.

The translator, an architectural critic, writes in the Introduction:

"I am profoundly impressed with the deep insight into Japanese architecture which the author has shown.

"The author covers some territory unfamiliar even to Japanese architects and the book has already served to inspire a number of leading Japanese architects."

The author is very sparing of text and relies largely on the 152 excellent photographs and their sequence to tell the story. His purpose is by means of photographs "to portray a feeling for the whole of Japanese architecture in terms of its visual order of form and space."

He has "assumed some basic acquaintance with Japanese architecture—and proceeded above and beyond these particulars" (influences, measured drawings, etc.).

The author emphasizes some of the special qualities of Japanese architecture:

". . . the most sweeping and at the same time most profound [principle] is a pervasive sense of order . . . the most important lesson of Japanese architecture for the modern world.

". . . the unique contribution of Japanese architecture has been the development of a system of asymmetrical order" which "imparts a unique vitality" which "gave a feeling of infinite extendability."

Ardent disciples of strict structural functionalism may be disappointed in the admission that "in the creation of the whole, structure is not always honest, evident and logical. Apparent structural members are freely added for their rhythmic decorative effect and others such as diagonal bracing carefully hidden. This is the mature handling of structure by men sensitive to the effect on the whole of each of its parts."

Another quality is attributed to Zen Buddhism:

"Space was felt to be the only true essential, the universal medium —only in space was movement possible.

". . . a concern for the small human-scale events in architecture . . . ordered progression of Man's movement through time and space."

This reviewer wishes that the author's self-discipline about words had not prevented him from noting one most ingenious detail, clearly shown but not explained in the Shoso-in Treasure House: major walls of triangular logs laid log-cabin style with joints which open in dry weather and close in humid weather providing automatically ventilation and protection for the priceless art collection of the eighth century and earlier. W. A. T.

The Living Museum (of Alexander Dorner). By Samuel Cauman. 216 pp. illus. 7¾″ x 10¼″. New York: 1958: New York University Press. $10.00.

This book is a tribute to an art museum director and lecturer on art history who was influential in Germany (1920-1937) and in America (1937-1957). He encouraged many pioneers in contemporary art and was among those who effected great changes in museum arrangement, principally to illustrate the continuity of art evolution and to reduce clutter. The best parts of the book are those describing the late Dr. Dorner's part in the prewar art life of the city of Hannover, Germany—still a cultural center although his modern collections were scattered by the Nazis as "degenerate art." There is also much of value on the history of art museums.

Dr. Dorner, as reported in this book by an associate, developed a quite materialistic philosophy concerning art. He saw a ladder of culture leading from *magic* to *myth* to *religion* to *philosophy* to *science*, but apparently broke off each rung as he climbed. (This happened to me once with the ratlines of an old schooner's rigging while at sea—not recommended.) Obviously this irreversibility is an intellectually narrowing concept.

Dorner was one of the pundits who came here in the late nineteen-thirties to overlay our culture-garden with, let us call it politely, a mulch of thick words — full of sound and fury and signifying much less than the title of his more creative contemporary's book: *Vision in Motion* (by Moholy-Nagy).

This illustrated compilation of essays, quotations and biographical notes, devotedly made by Samuel Cauman, reveals some undigested science-smatterings and what seems a conscious attempt to deny the usefulness of the individual experience of beauty. The main thesis is apparently an adoration of evolution-for-evolution's sake, panoplied in ritual garments of "social values" which by some strangely warped thinking are denied to the individual work of what is scornfully termed "contemplative art."

Of course it is good to understand the place of the object in cultural evolution and this is a useful idea for the arrangement of museum collections so that they may serve this educational and communicational purpose. We cannot help pointing out, however, that our own John Cotton Dana (1856-1929) of the Newark Museum (1909-1929) had a pioneer vision and practice of

the tradition of the service of the museum to its community. Our own better grammar schools used the museums at least twenty-five years before Dorner came to America. His straw-warriors named Science and Art stopped fighting here long ago.* Dorner curiously ignores the fact that the great mountain-peak artists of all time actually were in the advance guard of the sciences of their times.

What Dorner also did not see was that each thinking, growing individual inevitably brings something new to the experience of seeing a great work each time he visits it. He can indeed welcome the dynamics of his own changing points of view and environment without decreasing one iota of his delight in a work of art that deserves contemplation. To attempt to replace this re-creative experience (*not* "escape"!) by an academic pin-pointing of this item's place in the evolution of art (which this book admits could be accomplished by reproductions as well as by originals) is to mistake the very nature of sensory experience and to admit its atrophy. There is little doubt that our deluge of two-dimensional reproductions of all kinds of more-dimensional subjects has had this effect. There are relatively few people, for one example, who can tell (or care about) the difference between a photograph (or a drawing made from a photograph) and a drawing from an original subject. This is sense-deprivation, not enrichment—whatever its "social value" thru mass-distribution of reproductions—and it may cumulate into a serious loss for the true understanding of architectural space.

The kind of museum plan Dorner visualized, as illustrated here, would be far less functional in reality than he supposed. It would appear to be an obligatory circulation through considerable area completely introverted to avoid "distraction." This would result in an academic submersion suitable only for an undergraduate course in art history.

There was no mention of museum design in the 1956 AIA Gold Medal citation to Clarence S. Stein, FAIA, but his concepts of it are far more functional and clearer in understanding of the nature of museum visits and the need for "isles of refreshment" (garden courts, variety of spaces, etc.). These ideas were intuitional, concerning the nature of human perception and its need for change of focus and light-level for continued effective use, and concerning the holding of attention.

When will we stop our provincial deference to anything that is not our own! E. P.

Planning for Flood Damage Prevention. By Jerrold A. Moore. 61 pp. illus. 8½" x 11". Atlanta: 1959: Engineering Experiment Station, Georgia Institute of Technology (Special Report No. 35). Mimeo paperbound. $1.00.

This report is a study of community problems in connection with flood control. These problems are national in scope and affect approximately ten million people.

Under certain circumstances, these floods can and have become disasters to many people in large areas of the country. The book covers the area of the Tennessee Valley Authority—but the facts can be applied wherever floods occur. The social and economic results of flooding are considered.

The US Corps of Engineers have been assigned the duty of the control of floods. They have some seven hundred authorized projects. It would cost some $9 billion to complete this program, so it is questionable when these projects will be completed.

In many areas planning for floods has been nonexistent. If a proper land use and zoning plan had been prepared, many of these floods would have had less impact on the health and economy of the area. The report also brings out the fact that communities should prevent building in areas that costs them more in services than the revenue they receive due to deterioration of structures, both residential, business and commercial.

The encroachment of buildings, bridges, dirt banks and fences into river channels have reduced the area of the waterways in some instances, as a result the height of the flood has been increased in surrounding areas. A more judicious use of flood plains would also help to reduce the crest of these floods.

When records have been kept on floods, some indication of the problem is known and plans can be made to cope with them. Since predicting of floods is not an exact science, contiguous areas cannot feel immune from them. An unusual condition might arise that would increase the area of flooding.

This report suggests comprehensive studies of land use, zoning and transportation in areas that are subjected to periodic floods.

In built-up communities the problem is different. When conditions warrant it, the report suggests that a change of land-use in flood areas should be made, where deterioration from recurrent flooding has set in. These areas could be devoted to parking, helioports, warehouses and recreation.

It brings out quite effectively the methods suggested for the prevention of developments in these flood-prone areas. Control of light, gas, sewer and water services to these areas might be a method of preventing development of them, so that at a later date it would not require excessive expenditures by the communities. It also suggests that the various loaning agencies be made aware of the type of land on which the proposed developments are to be constructed.

The building codes in areas subjected to floods should include requirement of provisions for anchoring structures to foundations that in turn are designed to withstand pressures from rapidly moving waters.

Another interesting point is that insurance companies demand a high premium on flood insurance, making it prohibitive for most owners of property to carry this type of insurance. The losses, when they occur, are thus suffered by the individuals in these areas that are flooded.

A great deal of research has gone into the preparation of this report. It is well organized and documented wtih a lengthy bibliography. The problem is vast, but this report suggests a method by which a solution might be found. The authors are to be complimented for a fine piece of work.

THOMAS F. McDONOUGH, FAIA

*Recent evidence: *Bulletin of the Atomic Scientists* (Feb. 1959) is devoted to an excellent special issue on "Science & Art."

THE EDITOR'S ASIDES

SCENE: The private office of Cox and Box, Architects.

TIME: The present; about four-thirty on a drowsy summer afternoon.

BOX: Did you read Ed Stone's Convention Speech in the last *Journal?* I see he called the AIA an "exclusive club."

COX: Yes, he did, Box, but you've got to take a statement like that in context. What he really meant was that for a country with 175 million inhabitants, 22,000 architects certainly isn't very many. That's about one to every 7,000 people, or one to every 2,000 families. So it might better be said that architecture is an exclusive profession.

BOX: Seems to me that one architect to 7,000 people ought to be enough.

COX: Well, no one knows just how many architects per capita would be the ideal; but in Britain there is one to every 2745 people and I don't think many British architects are starving.

BOX: Most of them are probably working for the government by now and that could happen here.

COX: God forbid. But let's look at it another way. Put on an area basis. . .

BOX: Say, how come you've got all these figures in your head?

COX: I read Stone's talk too, and I've been doing a little calculating. Britain has one architect to every five square miles; we have one to every 164 square miles. So even allowing for the Rocky Mountains that ought to make you feel better.

To continue: We know it is necessary that there be a higher ratio of doctors in the population than architects, and probably lawyers, too. There is now one doctor to every thousand people and it is generally considered that there are far too few doctors. On the other hand, it seems to most of us that lawyers are swarming all over the place, but the ratio is about one lawyer to 1700 people.

BOX: Well, according to your figures then, you and I together serve a theoretical population of 14,000. I admit we haven't been doing so badly lately, but I'd hate to see that figure cut down.

COX: Wrong, my friend. Our theoretical potential clientele is more like 20,000, for you must remember that about 25% of registered architects are employes of other architects or of industry.

No, we need *twice* as many architects in this country. Only by there being enough of us can we really undertake the responsibility that is ours. With the architectural schools turning out 1200 graduates a year, and allowing for deaths and retirements, it still will be thirty years before the present number of architects can be doubled—and by that time what will the population be?

BOX: I see you've been reading some of this stuff about the architectural profession being responsible for "total design." We should stick our necks out and claim the right to design every little shanty that any guy wants to build. Not me! I'll pick and choose my jobs, and the plushier the better.

COX: I know you too well to appeal to your sense of social responsibility, but the fact remains that if the architects want to claim the professional prestige that the public accords to the medical and legal professions, then they've got to accept the full responsibility for everything that is done in planning and construction. More than that, the profession will have to be backed up by law, just as the doctors are. Only a crackpot would think of trying to perform an appendectomy without a surgeon—and he'd land in jail if he did. But any promoter can bulldoze all the beauty, to say nothing of the natural drainage, out of a tract of land, lay out plots and streets, and build a thousand houses and a shopping center, and as long as they meet certain minimal requirements of structural safety and sanitation, the law accepts them. Who cares how they look? Who cares what congestion is created on an already over-burdened turnpike? Who cares that the developer left no room for schools, churches or just plain nature-space? Who cares. . . .

BOX: All right, all right, sonny. Get off your high horse. We're not interested in small house stuff anyway. Just give me four or five good jobs a year, and you can worry about how total our design is!

COX: Well, I *am* going to worry about it. Suppose your doctor said "Just give me four or five rich patients a year and *you* can worry about the responsibility of the medical profession to the people. I'm going fishing." No, Box, you are very, very wrong and you know it. Just as it is the responsibility of the medical profession to take care of the health of man and conduct research toward the eradication of disease, so is it the responsibility of the design professions to plan and design the environment of man for his physical and spiritual well-being and to conduct research toward the eradication of dirty, crowded, noisy, ugly living conditions.

I saw your eyebrows go up, Box, when I said "design professions." I mean just that. Not only the architects but also the industrial designers and the town planners. Scratch any one of them and you'll find an architect underneath. Furthermore, any architect worthy of the name can extend his interests and his thinking to include planning in the very broadest sense—and in the future he's got to.

BOX: Look, it's time to go home and besides, the guy that's writing this is running out of space. So let's wrap it up.

COX: All right, but I'm not finished. Next time we have a chance I want to tell you why I'm doubtful that we even have the right to call ourselves a profession.

. . . Curtain.

RESEARCH FOR ARCHITECTURE

PART I: AN AIA CONFERENCE SUPPORTED BY THE NATIONAL SCIENCE FOUNDATION

Ann Arbor, Michigan, 10-12 March 1959

The AIA-National Science Foundation Conference on Research for Architecture resulted from long-time explorations, by the national AIA Committee on Research and the AIA Department of Education and Research, of needs and the status of architectural research. It was significant and gratifying to find the National Science Foundation was willing to support our search for the fundamentals which will underlie all research for architecture.

For the membership at large it should be recalled that the principal aim of the Institute with regard to research is to provide practitioners and educators with more and better tools for the design and planning of finer buildings and communities in every sense of structure, function, esthetics and economy. To this end the AIA set the following goals. They are:

- *AIA accepts responsibility for and will do research for architecture.*
- *the Institute will encourage other agencies to develop and carry out building research.*
- *the Institute will develop means to make research available.**

The conference was largely devoted to the subject of the first two items. Number three is well under way through services such as the Building Products Registry and the projected Index of Architectural Information.

It was recognized early in the work of the Committee on Research that the fundamentals—knowledge of man, his needs, aspirations, behavior and abilities—knowledge of total environment and how best to help plan it—were areas outside those of the profession of architecture. As a result, advice was sought from other sciences as well as from architects and the following representatives were appointed as a steering committee to organize the AIA-NSF Conference: Architecture: Bloomfield, Campbell, Pawley, Swinburne—Sociology: Foley, Merton (Columbia)—Structures: Holley, Nordby (NSF)—Planning: Kelly—Environmental health: Yaglou (Harvard School of Public Health).

As a result of long study culminating with the conference, the AIA Committee on Research for Architecture is preparing an operational research program and organization for Board approval at its autumn meeting.

Architectural research will be expensive and beyond the means of the profession for its sole support. However it is essential that the profession show its belief by modest financial support before we can enlist the aid of consumers, foundations or any other money source.

We are not embarking the AIA on any long-haired or unrealistic program of research. It is being developed with the conviction that it will prove of practical value to the individual architect, will increase the effectiveness and hence the prestige of the profession as a whole both in performance and leadership.

This digest has been written and edited (a prodigious task) by Walter Taylor, Eugene Magenau and Eric Pawley of AIA Headquarters staff. Full proceedings of the conference are being prepared for separate publication.

WALTER E CAMPBELL, FAIA
Chairman AIA Committee on Research for Architecture
General chairman AIA-NSF conference

*For amplification see AIA Journal (August 1958) report of Cleveland convention seminar on research.

KEYNOTE SPEAKERS AND DISCUSSANTS

ARCHITECTURE

Architecture—a redefinition

Herbert H Swinburne, AIA,*** Philadelphia

Comments on the nature of architectural research

Harold D Hauf, AIA, Troy, NY, Dean, School of Architecture, RPI

Man—the root of research

John Lyon Reid, FAIA, San Francisco

STRUCTURES

The architect's role in structures research

Myle J Holley, Jr,** Cambridge, Mass, Professor of Civil Engineering, MIT

Materials, influence on structures

Albert G H Dietz, Cambridge, Mass, Professor of Building Engineering, MIT

Research by observing & recording defects

Fred N Severud, NY, Consulting Engineer

PSYCHOLOGY

The behavior of the architect: process & product

Albert H Hastorf,** Hanover, NH, Professor of Psychology, Dartmouth College

Discussion

William H Ittelson, NY, Professor of Psychology, Brooklyn College

Stephen A Richardson, NY, Assistant Director, Association for the Aid of Crippled Children

SOCIOLOGY

Architectural research from a sociological perspective

Donald L Foley, Berkeley, Calif, Associate Professor of City Planning & Architecture, University of California

Discussion

Glenn H Beyer, Ithaca, NY, Director, Housing Research Center, Cornell University

Guy E Swanson, Ann Arbor, Michigan, Associate Professor of Sociology, University of Michigan

ENVIRONMENTAL HEALTH

Environmental hygiene & its meaning for architecture

M Allen Pond, Washington, DC, Assistant to Special Assistant for Health & Medical Affairs, US Dept of Health, Education & Welfare

Discussion

L P Herrington, New Haven, Conn, Director of Research, Pierce Foundation and Dept of Public Health, Yale University

Douglas H K Lee, Associate Scientific Director for Research, Quartermaster Research & Engineering Command, US Army

PLANNING

Planning and science

Burnham Kelly, AIA,** Cambridge, Mass, Associate Professor of City Planning, MIT

Discussion

George B Cressey, Syracuse, NY, Department of Geography, Syracuse University

Research in city design—a suggested program

Henry D Whitney, AIA, NY, Planning Engineer & Consultant

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Paul Zucker, NY, Professor of Architecture, Cooper Union Art School

*Member of AIA Committee on Research for Architecture

**Member of AIA-NSF Steering Committee

***Member of both Committees

► The general subject and the basic papers were thoroughly discussed by prepared discussants, the conference in assembly and by six discussion groups. The following summary is categorized under the topics which emerged, regardless of source or actual sequence.

Background

Architectural research is not new. In the eighteenth century French architects met regularly with the king to discuss architectural problems. It would be incorrect to assume that no architectural research has been accomplished. The serious interest of the AIA was manifested by the establishment of the Department of Education and Research in 1946. This Department and related committees have a considerable experience and accomplishment in many aspects of research including conferences and publications on documentation, building-type and technical reference guides, sponsorship and guidance of research on hospitals, mental hospitals, rehabilitation centers, technical studies on illumination, the guidance of industry-financed research through Research Advisory Service, etc.

However, this was the first conference involving both the related social and physical sciences and addressed to research for architecture as distinct from building research.

Purpose

Objectives are:

- to analyze relationships of the physical, biological and social sciences in the problems of optimum-created environment for human activities
- to define needed basic research—both in independent fields and in composite interaction
- to establish criteria for architectural research through which projects can be authorized and supported
- sharing of knowledge now available and to come, on a continuing basis

If architects can come to grips with techniques and possibilities of the behavioral sciences they will know better how to do what they must do. Architecture deals with planning, esthetics and human-focused requirements which cannot be accomplished without knowledge of how people behave.

Should the architect give his client a service which meets the suspected low standards of the public or should he perform to more demonstrably valid standards which may be neither understood nor valued? Means must be found to make research results known and intelligible to the public.

Architects should not be trying to guess the future in order to conform to it. They should face up to the responsibility for shaping the future. Design of structures and communities can actually change patterns of living.

Definition

Scope of research and range of resources would be better recognized by the title *"Research for Architecture."* This will avoid splitting hairs over whether research is accomplished by architects or others. Contributions to medical research are made by numerous specialists, not by practicing physicians, similarly for civil engineering, etc.

It is futile and unnecessary to define precisely the difference between basic and applied research. There are certain characteristics of basic research such as its general nature, its relation to several problems (not an answer to one specific problem), no specific end-product, possibilities of accidental discovery.

Other distinctions in research are considered more important: operational or service activities to improve efficiency of professional operations vs contributions to knowledge which would give greater depth and perception to design determinants.

It was repeatedly emphasized that an important and neglected area is clinical research or investigation of the actual use of completed buildings checked against the original assumptions and standards. Such clinical research would yield information not only for design of similar structures but for the design of research situations for more precise investigation.

Architectural forms and spaces will themselves produce individual and group behavior susceptible of research including the relation of the architectural design to the induced behavior.

Advance collaboration between designer and researcher could facilitate setting up of variants and control situations for later investigation. Ar-

chitects should develop theories or hypotheses derived from general professional experience to be tested by researchers in appropriate related fields.

There was the customary concern that research might attempt to reduce creativity to formulas. It was generally agreed that this is impossible and the effort undesirable. There was agreement that science makes use of intuition, that distinctions between science and art are not precise or valid and that research can greatly improve and refine the architects' tools for design and self-criticism. Intuition is the individual's process of organizing and collating, with imagination, knowledge and experience previously accumulated. This background can be made deeper, richer and more precise by research.

The approach to human needs to be met by architectural design will require precise distinctions between values, preferences and attitudes and recognition of the differences between those of the architect and his clients. There are also varying rates of change of values, professed values, preferences, attitudes all relative to obsolescence of the building and the effect of the building on values and organization.

In view of the broad scope of research considered by the conference, building research should be regarded as a subdivision of architectural research and not the converse.

Evolution and Transition

"The architect is building on a past which apparently nobody liked, he is building for a future which no one in the world can predict, and he is building in a present which is so transitory as to be almost irrelevant."

Acceleration accelerates. The magnitude of change is greater and the rate of change is swifter. The construction industry however is just coming to a realization that it is one of the few remaining industrial frontiers, which has been preserved by barriers of failure of communication and traditional points of view. It is preserved in an outdated form but still regarded as a prime area for venture and gain.

Engineers have found that empirical or pseudo-scientific training is inadequate to cope with today's highly scientific and complex problems. Now the architectural profession is beginning to realize that it will have to do more research if it wishes to stay in the area which is its prerogative.

Architects' attitudes are changing from the former alleged artistic detachment to a different professional frame of mind which regards the bones, intestines and arteries of their buildings with genuine interest and even with the speculative eye of the artist.

Two architectural fallacies are being reconsidered. First, the worship of structural considerations to the virtual exclusion of others equally necessary, and secondly, the deification of the intuitive or individualistic approach to design.

Some presently available materials have few inherent limitations of form, or imagined limitations, a situation which is leading some designers to make a fad or fetish of form. There is also a preoccupation with combinations of sticks, webs, spherical-triangle and warped-surface structures into which nonconforming program requirements are being forced.

Communication and Documentation

There was unanimous agreement in the conference that the classification and recording of research information is the number one priority—its modest beginnings can be expanded without delay—it is a necessary prerequisite to any new research.

It is generally known that a great deal of research applicable to architecture and the building industry is being carried on and much of it reported but at no one place is there a clearinghouse recording, abstracting, reference and reporting service.

In addition to formal and programmed research, there has always been a certain amount of specialized research in or under the auspices of architectural offices in advance of design. There is a considerable quantity of this valuable information which is possibly used once, filed in the original offices and never reported. Architectural journals, rarely report research. A demand for this type of publication should be developed, with prizes for the best technical papers.

The recording and wider publicizing of research findings would help in the penetration of authoritarian barriers of codes, regulations and standards which interfere with use of new scientific knowledge.

It will be essential to establish some criteria and limitations. There are 60,000 regular scientific periodicals published in the world which contain an unknown quantity of new knowledge applicable to controlling environment for the benefit of man. Much can be learned from other disciplines.

A specific program could explore the general area of impact of architecture on the public. Seminars with existing learned and professional societies in joint sessions would be mutually beneficial,

with presentation of sociological and psychological problems to architects and the converse. Interdiscipline study-groups are already being set up in some institutions.

Education

Schools of architecture should be encouraged to utilize existing staffs and facilities more fully to identify areas of desirable knowledge in other fields useful to the architectural profession.

The major goal of a revolution in medical training has been to generate a real concern about medical research on the part of the practitioners and the profession generally. An essential step now is that professional schools of architecture do the same. It will not blossom suddenly.

The following principles relate research to architectural education:

- the university school of architecture is the natural breeding and training ground for research personnel
- architects to be effective must have relatively complex knowledge and appreciation of sciences outside their immediate professional scope
- architectural students must be brought into contact as early as possible during their training with sociological and psychological problems and related research
- social science-related research in architectural schools can best be taught by the presence of faculty members engaged in such research who can gradually interest and involve graduate students in their work

Architects are not trained or experienced in reporting and publishing as are men in most of the scientific disciplines. This is a problem in the education of architects generally and in the training of researchers.

There should be more research-minded professionals in the faculties of the schools of architecture, not only to train researchers but to develop in future practitioners a receptive and supporting attitude toward research and research findings.

Deans of schools of architecture should be urged to emphasize research contributions and the development of research abilities of their faculty members.

Finance

Good research is costly in time and money and leads to more research requiring more funds, but from an overall point of view research is exceedingly cheap when taking into account all of the costs of trial-and-error design, construction, operation and maintenance. In the life of any kind of a product, research is certainly one of the cheapest investments in terms of the total return.

More difficult than getting money is finding ideas for research proposals of good purpose, for which money is available. The architectural profession has not yet brought its purposes before the public, as medical research has done, to show their importance.

Organization

While the architect is the coordinator of many technologies in building design, it does not follow that his position in research is necessarily analogous.

It is of utmost importance that the research program be planned with a longer life than that of any committee.

One function of a central research organization would be to select and clarify problems which could be researched and reported for the benefit of a great number of architects and their clients—to act as a central architectural research intelligence agency collecting and disseminating status reports on current research projects.

There were differing opinions about a large central research organization—better progress may be made faster by developing existing research resources than by setting up a central bureaucracy. Research should be decentralized according to human resources and available facilities. A research center could serve only for coordination, documentation and the avoidance of duplication.

Research Personnel

Obviously it will be necessary to encourage and assure adequate training and numbers of architectural research personnel. The training would include apprentice experience in ongoing research with encouragement to persons trained in architecture to pursue further education in selected branches of science with financial assistance in the form of scholarships leading toward doctoral degrees.

Architectural education is already to a considerable extent clinical and incorporates some features that would be called research of a simple sort in some sciences.

It would be necessary to provide motivation for architects to do research with no stigma attached to non-practicing architects so engaged. There

may develop a new type of consultant, a consultant for architects. There are architectural offices which have professional researchers and librarians.

The architectural profession might take a clue from developments in applied science. A need has developed for personnel who can cope with the overall problems of complex systems, who can grasp the entire picture and synthesize the various elements involved, making use of relatively new and exotic areas such as linear and dynamic programming, information theory, and a host of other relatively new areas and techniques. In engineering the man is known as systems engineer or operations researcher.

Program

The conference did not have as its objective the precise formulation of a program but numerous suggestions were made.

A lot of available knowledge is not put to use. These contributions of other sciences could be dealt with by a series of steps:

- recognition that there is a basic body of knowledge—a sort of working capital which is utilized whenever we seek the answer to the specific problem
- find information, assemble it and bring it to those who can use it
- when information needed to solve a specific problem is not available, undertake an investigation

Architects are concerned with the organization of space. This should be not only within four walls but all around the globe. The natural conditions of space vary greatly in the inhabited areas of the world and if we are to design space properly for man's use we must recognize the variations. We need to broaden our horizons and not limit ourselves to structures and certain institutions but look at the entire nation and the entire world.

You cannot plan until you have finished the inventory. Almost everywhere we need better and clearer goals and a greater sense of meaning and design in our lives and in our environment.

Our national life focuses in metropolitan areas which should be the special province of the architect. Architecture is the art and science of space production and a city is the environment in which space is most at a premium and where its proper location and ordering is most needed and appreciated. We must identify the vital research needed by the city if it is to become livable again.

The complexity and difficulty of some of the proposed research should not be overlooked or minimized. In many respects the behavioral sciences are not yet equipped to answer direct questions. In the social sciences it is difficult to get independent controllable variables.

From observation of what has actually been done and the choices which people make from what is available, there can be developed a kind of actuarial knowledge in terms of the behavioral sciences and physical conditions. The clinical process followed in medicine should be followed in relation to building design, not only for analysis of structural failures but in terms of the social and occupational functioning of the building.

This kind of knowledge will make possible connections between architects and scientists. Esthetics should be one area in which sociologists and psychologists might make a significant contribution although it is one of the least-developed areas in these disciplines.

It is not necessary to wait for a fullfledged research program in order to start. We can develop a group that can cull information from the research which is right here in buildings. There is full-scale research going on right now waiting to be tapped, recorded and reported.

Nothing will happen until someone says "Let's go." We may make some false starts and have to come back. This action should have central guidance and advice from those who are already deeply engaged.

ABSTRACTS OF PAPERS

Six basic papers were prepared and distributed to all participants in advance of the conference. They were the subject of special comments by prepared discussants and general discussion by the entire conference and by discussion groups. The papers are here condensed to thirty percent.

Herbert H. Swinburne:

Architecture—A Redefinition

► In a century and a half of Webster's definition of architecture changed from "art of building" to "art or science of building"—one word symbolizing the effect of the Industrial Revolution. From sticks and stones of shelter by sophisticated manipulation of science and technology come twentieth century buildings.

Architecture is well understood and appreciated visually as separate buildings, functioning assemblies of materials and equipment.

Concept, definition and practice are too limiting, too much emphasis on physical structure, too little understanding of man, society and the true role of the architect.

Man has constantly altered his unsatisfactory natural environment. Today in most areas he manipulates sections of it for his comfort. Eventually he will completely control total environment. The needs and purposes of man living in society are the controlling factors, relating to his ultimate goals. Architecture, then, is not merely the art or science of building; it is the creation of a total environment for accomplishing the aspirations of man.

Redefinition and research

To build wisely and efficiently for man we must study him individually and collectively. The physical sciences are studied incessantly but aspects of the behavioral sciences affecting the shape and use of architecture are little known.

A century of industrial revolution changed architecture irreversibly—a century of social evolution will have farther-reaching effects.

Adapting in years rather than centuries, changing society demands a new environment. Magnitude and rate of change accelerate, affecting architecture and professional practice.

While constructing vast containers for all people, all activities, the architect must be knowledgeably sensitive to their needs.

The architect, trained as a generalist, must encompass more and more knowledge of many diverse fields and apply their principles to buildings, space between, to cities and regions as he creates new environment, leading in the creation of a vital dynamic quality.

To participate in the sense of destiny, of people moving toward goals of a better society, the architect must embark on an accelerated program of professional research, knowing that he, being uninformed in this vast field, will need specialists from all disciplines. Integrated directed research is necessary now, and ten years late.

Architecture—Structure of the Creative Process

Architectural research begins with relating the subdivisions of architecture to each other as in practice, also to all assisting fields of knowledge. Each well-defined segment is a potential research area, some "architectural," some "building" research, some possibly not previously regarded as researchable.

A research network relates researchable facets of architecture to the knowledge of man. The profession and society are linked by a communication system, which should be researched for improved mutual understanding.

Architecture—Elements of a Research Network

More detailed analysis* lists sets of elements for each segment of practice and other disciplines, perhaps unconventionally aligned. This permits tracing the relationships of one element to others in architecture and through a research network to other branches of knowledge, revealing much knowledge useful to architecture and to architectural research. Such graphic analysis discloses a variety of relationships and overlaps.

Research—Needs and Priorities

Areas of needed research may be classified in three categories originally suggested by Dr Robert K. Merton:

- problems in architecture generated by society
- problems generated by ongoing experiences in architecture
- problems of the place of the profession of architecture in society

(Fourteen research subjects suggested by Swinburne will be included in the compilation of recommended subjects in part II of this report.)

Research—Frontal Attack

By 1960 industry will spend ten billion dollars per year on research and development. Those who do no research are soon outpaced in science, industry, government, business, education—and architecture.

Construction is a $50 billion per year industry. Millions are spent on materials and building research and product development but almost nothing on basic architectural research.

A belated reasonable minimum program would include:

- Research Study Group (Headquarters Staff)
  location determined by best access to related disciplines, a leading university and school of architecture
  staff under a research administrator in liaison with AIA, to include ten most competent researchers from various related disciplines

* presented on large charts at the conference.

The study group, exploring general problems in architecture, would perform some research and would develop methods for cataloging, abstracting and disseminating all architectural research in that performed by others.

- Contract Research

  The study group would allocate and monitor research contract projects, minimum four per year, with various universities.

The difficult field of integration of disciplines might be the subject of an early research project. Relevance, clear definition of purpose, high calibre of personnel and mutual understanding of roles are all essential.

Research and Cost

Good research is costly. It must be supported by those who are benefited, the profession and the public. Over a long period, donated time by individuals and universities might produce results, but in terms of special interest—not meeting the needs of the profession.

The study group headquarters facilities with overhead and supporting staff would cost $35,000 per principal researcher. University contract costs vary widely according to scope and subject.

Research and Time

No research program is predictable and only one project in eight is successful. Five years would be required for organization and accomplishment of the first significant results. ◄

M. J. Holley, Jr.:

The Architect's Role in Structures Research

► Factors which demand cooperation sometimes create misunderstanding and frustration—the architect trained to conceive beautiful and useful structures, his necessary breadth of viewpoint precluding mastery of many disciplines involved in final creation—the structural enginer called upon to judge capabilities of a proposed form or provide a supporting system within it.

The relationship between architect and structural engineer may be more delicate than that of architect and other specialists. The proposed structural form may be the essence of the architect's creation—to the engineer it may be illogical, impractical or even impossible. Harmonious cooperation is more typical, but frustration or conflict may be intensified by the degree to which architects and engineers practice each other's roles and thereby acquire a real or imagined competence in the other's field. Each may overestimate the range of situations for which his talents are adequate.

Cooperation between architects and engineers, often productive of outstanding designs, may be strengthened by structures research. Progress can be accelerated by recognizing the interdependent interest of both in indicating major problems, research objectives and methods of attack, leading to improved communication between the two professions.

The engineer requires better understanding of certain aspects of structural behavior and better techniques for evaluating probable behavior of specific hypothetical systems—to enable him to provide prompt judgment and perhaps specific guides which will increase the frequency of favorable judgment.

Promising areas of structures research may be indicated by comparison of conventional philosophy and significant modifying trends. Development of structural engineering has been dominated by the "unit stress" concept. Mathematicians, elasticians and structural analysts have labored to produce techniques for evaluating internal gross forces and the unit stresses in a variety of complex assemblies. Familiar concepts and terminology for acceptable strength-stiffness behavior are:

- a useful range of nominal unit stresses related to elastic limit values
- working loads
- structural analysis to determine thrusts, shears, bending moments, etc

Benefits of this approach have been: practical methods and criteria applicable to most structures, wide acceptance based on good service records permitting codification and the training of vast numbers of engineers.

Where the demand for a specific structural form has been sufficiently insistent and its merit obvious but the analytical tools inadequate, the engineer has utilized test data and judgment to formulate empirical design methods, still expressed however in nominal unit stresses.

The state of the art and science has constantly lagged behind the needs of structural designers.

Recent developments indicate that the unit stress concept is too restrictive—that it is but one approach.

There is no implication of inability of the structural engineering profession to cope with problems of building design in the present era.

Rather—research is needed to insure that the grasp of architect and engineer alike shall not be needlessly shorter than their reach.

More specifically the following areas are suggested, with no implication of unimportance to others omitted, which do not reflect basic changes in concept or method:

- Application of *electronic computers* to stress-analysis of structural forms for which known methods of stress-analysis have been too costly. This tool will also permit computation and tabulation of stress solutions for recurring forms. Under some circumstances the computer can be asked to select an optimum design for given criteria. There is no reason to fear that man's creative and analytical talents will be supplanted. The computer is an infinitely superior slide-rule. A preliminary architectural research objective would be the definition of recurring forms of greatest interest.

- Extension of the *ultimate strength and limit design* concepts. While not practicularly new, recent progress has been rapid, but the terminology and assumptions are not completely logical.

  The ultimate strength concept:

  - dispenses with unit stress criteria
  - was adopted as alternate method by ACI
  - is a first step toward limit design

  Limit design implies:

  - proportioning of entire structure for collapse of the whole at a specified multiple of working load
  - this concept eliminates unit stress criteria and elastic analysis for internal gross forces
  - AISC specifications and ACI code will soon permit use of this method

  These new concepts have been applied mainly to relatively simple forms which were as easily handled by conventional methods. Of greater significance is their probable future application to forms for which unit stress solutions are *not* available.
  While architects may not be directly involved in this area of research, they should learn to think in these terms, for improved communication with engineers, and in relation to the following research area:

- *Utilization of Probability Theory*

  In conventional design there is generally no attempt to relate the factor of safety to specific conditions. The use of ultimate strength criteria rather than unit working stresses permits a more rational specification of factor of safety. Computed ultimate strength can reflect probable uncertainties of material and degree of quality control. Choice of load-factors can be based on the probability of developing particular load intensities during the life of the structure.

  This approach, little-used to date, offers more rational load-to-strength ratios. Probability theory is mathematically well established. Indicated research is toward better definition of probable loads.

- *Model Analysis*

  Constantly improving capability for analytical evaluation will never meet demands imposed by newly devised forms. Model analysis may be the required supplementary technique. Considerable research effort will be required, architects contributing suggested forms for general model analysis. Corollary advantage would be a better understanding of physical behavior of a variety of forms. ◄

M. Allen Pond:

Environmental Hygiene and its Meaning for Architecture

► Sanitary or public health engineers, like architects and city planners, must have considerable knowledge about, and ability to relate, many seemingly disparate kinds of knowledge in manipulation of environment for the protection and improvement of public health and safety.

The architect's principal objective is to give form to ideas and concepts that are not readily—if at all—made tangible by others. He, therefore, like the practicing engineer and physician deals primarily with the products of research.

The advancement of environmental hygiene has been largely dependent upon progress in utilizing the products of a variety of research efforts. The rate of progress in architecture will be no faster than the rate at which empirical or scientific knowledge is accumulated and applied.

Society still lacks the precise knowledge that will be necessary to bring many of the psychological and physiological impairments of man under control. Architects and planners have a major stake

in—if not responsibility for—efforts to expand knowledge about relationships between environment and the health of man.

The impact of sanitary science on society

A clear relationship exists between the control of water-borne disease and urbanization. No community can develop and survive without potable water. The full flowering of great metropolitan areas is more and more threatened by absolute shortages of water. Some of us will see cheap energy making it economically feasible to use sea water for domestic, industrial and agricultural purposes.

However as more water is used the problems of disposal of sewage and industrial wastes grow and become more complex and serious, including waste from new compounds used in industry. There have been almost no significant advances in urban sewage treatment, efficient disposal of refuse or control of air pollution and radioactive substances.

These problems will be of increasing concern to architects and city planners. While the profession is not equipped to make fundamental contributions to the needed new knowledge, which is more likely to come from physical, chemical and biological sciences, architects, planners and sanitary engineers can serve a useful catalytic function by constant stimulation and encouragement. They must press for solutions if their own efforts to improve the living and working and recreational conditions of man are to be successful.

Blueprinting a research program

The basic difference; *research* involves a diligent search for knowledge; *technology* has a definite end-product target. Research in any field is an evolutionary process—it is impossible to predict where a given line of investigation will lead, and there is never an end-point. Research may not only result in useful products—it may create additional problems, such as insects developing resistance to DDT. Unless aimed at certain broad targets, the design of a research program may be frustrating.

For the foreseeable future, public officials and scientists will together play a leading role in organizations of the nation's major research efforts.

Popular appeal is very significant in the competition for the research dollar. The public interest in research on cancer and other dread diseases and in space and atomic research is much greater than in environmental hygiene. In the long run the by-products of well-supported research will contribute to environmental control and design—the sanitary, physiological and psychological lessons from an atomic submarine full of men submerged for weeks, or the experience of AEC research centers with ventilation, waste disposal and air pollution applied to design of typical buildings.

We are approaching the threshold of public interest in the social sciences, of concern to the architect. Architects are more likely to make useful contributions by finding ways of applying new knowledge as it becomes available. The profession must rely on the leadership of various professions and disciplines to cooperate in a common search for knowledge and must prepare to work closely with the scientific investigator.

One of the most important gaps is the lack of efficient machinery for the winnowing of new knowledge for utilitarian purposes. Architecture should use its resources in stimulating and supporting efforts to speed efficient use of new findings from research conducted under other auspices.

Two other possible approaches, not mutually exclusive:

- the architect—like the engineer and the physician—will require intensive training in one or more branches of basic science if he is to enter actively into scientific research
- organization of machinery to bring broadminded and understanding members of the scientific fraternity into close and regular contact with the architectural profession

A successful example: the Committee on Hygiene of Housing of the American Public Health Association utilized first-rate scientists and broadly experienced administrators. ◄

Burnham Kelly:

Planning and Science

► To understand the impact of science on the design professions, their concerns may be divided into design and construction. Most scientific effort has focused on tangible, visible, lucrative construction. However, true science is rare and its effect on design diffuse.

Science in Construction

Our best scientific brains can rarely be interested in normal construction where the bulk of needed information has long been known and presents a pale challenge compared to electronics, nucleonics, space travel. Industrial potentials in the construction field are vast and significant developments have been carried on, but the field is not rich in scientific brains.

Still farther removed from the scientific base are building regulations. Science is predigested in the regulatory process or the equipment engineers' rules of thumb. For the average architect and planner and developer, the pipeline to scientific truth is the building code, zoning ordinance, subdivision regulations or FHA requirements. If a fundamental fact has not penetrated these un-sound-barriers, it may as well not exist.

The designer's understanding of construction is shown in working documents prepared by hired specialists, who are not regarded as designers, to meet the practical situation of the immediate job.

Final construction decisions are made at one more remove from the scientific base. Facts of cost dominate the horizon, blocking the view of potentials and innovations. A penny saved today is nowhere more valuable than in the construction industry, where one might expect a broader interest in performance over the life of the project.

There is far too little exploration up and down the series of separations of construction from science: The specification writer does not look behind the codes—the code writer uses only current engineering practice—the engineer rarely ventures outside a narrow well-exploited special background.

Major improvements based on scientific advances can be put into effect only when a designer sees the process whole. The most pressing problems will receive scientific attention only when there is feedback from firing-line experiences.

A false sense of concreteness is given to certain details because they can be analyzed and dimensioned.They exert undue design influence and there is strong suspicion of pure fashion as new bits of knowledge become "must" design features—solar geometry is no more important than artificial illumination considering hours of use.

Science and Design

From Vitruvius to now, designers have attempted systematic analysis of the design process. Why has it apparently stopped?

Construction technology outran design theory, demolishing old ideas and leaving insecurity. For many, design in an industrial civilization is simply the consequence of construction. What is possible within cost, codes and time limits is good because it is possible. A more refined version: Assuming that the basic use function can be generalized and expressed, a construction by which it is expressed is *ipso facto* good design. In neither case is there concern for a scientific basis for the design process.

A determinist fringe of science-awed designers suggests in effect that when all necessary facts are known, the variables may be fed into a great computing machine from which emerges the answer.

The opposite school believe that only the intuition may be trusted and that science has nothing to do with design. If intuition means a creative insight based on general background and experience, it is at least as much needed as sound construction knowledge. Intuition and science are not at opposite poles. The history of science shows that some important original scientific advances were the result of instinctive certainty working through very unscientific procedures.

An important role of design is to postulate from a mass of intangible and little understood experiences, hypotheses or solutions for which scientific tests may then be constructed and carried out. The essential feedback to the scientific world barely operates now because of communication obstructions and the difficulty of setting up experimental and analytical studies.

A first requirement is a summary statement of some problems in clinical terms. The difficulty of developing a systematic approach does not justify the conclusion that the only effective tools are intuition and political compromise. If rigorous systems of analysis can be developed, the practicing designer can get effective help from the scientist, both having better ideas of the kind, purpose and degree of reliability of assistance required. However scientists will not gamble time, scarce funds and professional reputation if they believe that the effective determinant will after all be the designer's intuition, the non-conforming findings of science to be damned.

Suggested problems at the urban planning scale: the perception of cities; a skilled investigation of the complex and dynamic urban environment, of city impressions of various kinds of people in different activities, in various parts of the city at various times and seasons.

The nature stereotype in the mind of urban designers: study of the high values placed on fresh air, sunlight, green areas, trees vs the possible substitution of artificial conditions. How important are the natural phenomena socially and biologically? What cost of adaptation to the artificial?

A nation of nomads: the future relative importance of fixed real property vs movable personal property (furniture and automobile). The home and neighborhood as major stable elements in fluid pattern of life. Possible advantage in design for efficient functional services vs gratification of individual preferences.

Institutions: the character and role of schools, churches, hospitals related to mobility and urban pattern changes.

Optimum scale: of shopping centers, industrial parks, suburban residential communities, etc.

Industrialization of construction operations.

Few architects, planners, builders or regulating officials are prepared to handle the full range of opportunities and responsibilities involved in the new operating scale, or to appreciate the degree of the resulting environment change.

The problems are difficult and concern broad objectives. Difficulty and honest frustration are preferable to the false security of irrelevant concreteness and of traditional disciplines.

Research should seek to gain for design the full benefits of scientific advance now filtered out by the customs of engineers and the prejudices of administrators. ◄

Albert H. Hastorf:

The Behavior of the Architect: Process and Product

► Some salient issues should be defined and some distinctions made, to induce some order among many ideas about research dealing with psychological aspects of architectural practice.

Distinction should be made between:

process of the creative act
result of the act or acts—the product or design

Psychological issues under process include:

selection of architects
training of architects
orientation toward end-use of empirical research
architect-client communication and interactions (also under the product after completion of design)

What should the architect know?

The architect cannot be a Ph D psychologist.

Distinction to be made between:

researchable problems with bearing on architectural practice (effect of varying architect-client interactions on final design)
sophistication and useful information (interviewing techniques)

Basic vs Applied Research

Avoid entanglement in this verbal morass. There is a very tenuous dividing line between two types of studies: the creative process in architectural design—do we study the creative process as a general problem or do we need to do specific (and supposedly applied) studies of architects' creativity?

Questions at what level of generality?

We may be prone to make questions too global —"Can psychological studies of space perception lead to the more effective design of building interiors?" leads to the answer "Yes—but"— the "but" meaning that one must specify the problem *down* to some workable level.

Relation of Science and Art

There is no conflict between science and art because they are generically very similar. Oversimplified—human experience (knowledge) is a function of the perceptual process and there is no way in which the perceptual processes of the artist and scientist differ. Oft-mentioned objectivity applies to the methods of observing a phenomenon. Science specifies conditions as explicitly as possible so that the study can be repeated with the same results. Objectivity does not reside in the observer, qua observer. The experience (or the creation) of the artist does not have to meet repeated verifications. The artist can make use of certain scientist-gained knowledge to increase the effectiveness of his own creations.

Values

There is no issue more filled with pitfalls. There is a strong tendency to believe that if people from some other discipline would only talk plain English they could answer a general question such as "is this design psychologically good for man?" The psychologist cannot answer—"good" is undefined.

Another type of question concerns prediction. The architect and planner may ask the sociologist and the economist what will be the pattern of suburban living fifty years hence, the goal being to design communities and houses that will be "good" or functional. The predictive capacity of those disciplines may serve to assist in the design process, but the converse should not be overlooked—present designs affect behavior and can serve to shape the pattern of future living and working.

Behavior of the Architect

The crucial problem underlying aptitude and interest tests and proposed changes in curriculum is that of criteria of success. Any research must depend on a set of criteria relating to scholarship, or earning capacity, or productivity, or creativity, or a synonym for such concepts.

The statement that added courses in social science, space perception or interviewing techniques,

etc., "will make them more effective" requires some definition of "effective."

Creativity

A considerable amount of psychological research is now being done on creativity *per se,* involving investigation of accompanying abilities, life-history correlates and the role of the working situation. Recent studies of outstanding scientists investigated their origins, training and psychological test behavior. If architects could agree on a definition of creative design, a similar approach could be made.

Data Processing—Design

Psychologists, mathematicians and engineers have become involved in systems analysis research. In order that certain decisions can be reached, a lot of data have to be processed for which there are more or less effective ways.

The architect has to process a great deal of data and come up with a decision (a design). In what order does he obtain these data, or make "small" decisions, many of them irrevocable? He is no doubt overwhelmed, and too little time is spent on integrating data, which is the real essence of making a design.

There may be better ways of getting the data. There may be alternative and better ways of ordering the decisions. The teaching situation might be used as a "laboratory" for comparing alternative ways of organizing the design process.

Psycho-physical aspects of Design

Psychologists know a good deal about visual space perception. There may be some general rules of value to the architect.

The real issue is whether the psychologist can provide data helpful in specific design problems as they arise. It is possible to abstract some of the variables so that they can be experimentally manipulated. Solving only one specific problem at a time, and with pilot experiments, it may in time be feasible to build up classes of data.

The same propositions apply to analyses of color phenomena.

Behavior and physical arrangements

It has been demonstrated that arrangement of dwelling units affects the types of social groups. Given a desired working group or a pattern of living, how can they be promoted by physical arrangements or by design of a structure? Other problems are exemplified by housing for the elderly, special hospital wards and mental hospitals.

If problems or special demands are phrased quite specifically the psychologists can gather data of real help in promoting certain kinds of behavior. There is some existing useful knowledge but most of the interesting questions that can be asked will need new experiments to answer them.

Other potential areas for research are the architect's interaction with clients, other architects, and with society.

Architect-client

So little is known about conditions for a happy productive relationship, basis of selection of architects, expectations and causes of pleasure or disappointment with results. Diagnostic studies are certainly indicated, with interview studies as a start.

Architect-architect

There is an increasing amount of group practice and of interdependence between architect and specialists. It always seems that someone feels threatened, and we know all too little about such interaction. Research on the medical profession indicates that issues can be clarified toward solution.

Architect and Society

A series of problems here concern also the sociologists: What is the public's image of the architect, its expectation; the architect's image of his own professional role, conflicts and concerns? These all can be probed yet so little is known.

There are also questions of the profession's responsibility to educate the public which accepts what is, unaware of what might be. Responsibility outweighs the fear of unprofessional conduct. Indicated studies are on the public's state of sophistication and effective ways of changing it.

Possibilities and Limitations of Psychological Research

Even given certain knowledge about how the human organism functions (in terms of perceiving, learning, etc.) the psychologist still cannot come up with any *rules* about how to design a building. It is doubtful whether psychologists can specify any laws of "good form" (Gestalt psychologists to the contrary).

Some questions may be explored in terms of effectiveness of human functioning, with careful preciseness of the question and indication of functions to be maximized.

Psychological sophistication and research techniques can be of real help. Science is not an auto-

matic or magic helper. Asking the right questions and getting answers takes time. Architect and planner cannot avoid "what ought to be" questions and science cannot answer them but may well provide information to make the guesses more educated.

Meaningful research problems will emerge only from intensive discussions between architects and psychologists which will require that some architects gain sophistication regarding psychological research and that interested psychologists acquaint themselves with architects' problems. ◄

Donald L. Foley:

Architectural Research from a Sociological Perspective

► Sociology studies social environment embracing persons, social organizations and culture. This involves not only other people as important ingredients of any one man's environment, but also an organizational aspect including the positions or social roles that people fill. There are expectations or norms as to how persons will perform in various roles—the great web of expectations, as to outlook, motivations, etc., constitutes culture. Much can be learned from other disciplines.

Sociology—A Holding Company of Diverse Interests

Social organization: division of specialized effort for complex tasks, integrated into a single ongoing activity system.

Institutional segments: family, government, religion, etc., also formal and informal organizations, bureaucracy.

Individual behavior: modified or influenced by social environment and the converse.

Values: shared assumptions or convictions re what is preferred or right—essential elements of culture and social organization. (Research interest shared with social anthropologists.)

Population: quantitative studies of increase, movement, etc.

Human ecology: adaptation of social organization to physical environment—interrelations of functional organization, technology and spatial patterns of communities. (Geographers have related interests.)

Psychology focuses on the individual and his physio-psychological mechanism, while sociologists emphasize the importance of the group factor, the social environment mediating human reactions to physical environment and to other individuals.

Sociologists may be differentiated as between the "hard data" group insisting on measurable, quantitative sources of empirical data, and those who question such approach to some phenomena most deserving of study.

Possibilities for Basic Architectural-Related Research

Too much should not be promised in the name of research. "Researchism"—the uncritical notion that research is a panacea for any and all problems can be as unfortunate as "scientism." Many problems of clinical nature faced by the practitioner contain so many variables and call for such exercise of judgment that they are not reducible to clear, researchable terms.

Research cannot be a substitute for the clear determination of goals. In many cases research will only provide a greater understanding of reasonable limits of choice and prevent serious errors.

Research should lead to better choices among alternative approaches. The research mind in the profession, or in the office, should constantly be asking: On what basis do you select this alternative rather than that one? How much difference would it make if you used alternative A, alternative B or alternative C? What is the assurance that the use of concept X will bring about Y reactions?

The spirit and methodology of research should improve the quality of analysis employed by practitioners and by design students. Students should be exposed to research, not only to develop more career researchers, but to develop a respect for what can be expected from research, ability to ask intelligent questions, and an attitude conducive to support of research, all to the end that architectural practice may be more adequately supported by knowledge.

RESEARCH AND THEORY

Theory is a body of interlocking propositions. For practical use the number of variables is reduced from those of actual experience but still apply, without serious inconsistencies, to many possible relationships and changes.

Practice Theory

Each profession needs to develop appropriate theory, which may take the form of "practice theory." Such theory is consistent with related scientific theory and similar to academic theory, but makes assumptions concerning goals of professional action (good health, beautiful environment, etc) and focuses on the attainment of these goals.

The formulation and refinement of *architectural practice theory* is the central task of architectural research. What is basic in architectural research

cuts across the distinction between basic and applied, and involves a range of explorations tied together by chains of reasoning such as applied in practice.

As a minimum such reasoning should take into account:

value goals of professional effort
how people use architectural structure and space
how spaces are created, perceived and reacted to
how structural systems work
how materials work
how architect selects alternatives

Specialists in architectural research will be responsible for weaving together:

understanding of architectural practice
rudiments of theory formulation
potential contributions from many fields

Some problems of architectural concern such as creation, use and perception of space will be found to be under-researched by other fields. Theory in other fields may not be well adapted to architectural problems. Therefore architects should confidently build their own central theoretical framework against which to judge the relevance of research findings by others.

ARCHITECTURAL RESEARCH NOT TYPICALLY SCIENTIFIC

The goals of professional effort may be clarified by scientific research but they also reflect surrounding culture values and professional traditions. This sort of research requires sensitivity to human needs, professional responsibilities and understanding of codes and other governmental influences.

Architecture has traditionally drawn heavily from the arts and humanities. Experimentation and key ideas as to space design may come from visual-art fields. Exploration of such ideas calls for approaches other than customary scientific methods, although they may be reformulated into hypotheses for scientific examination. Practitioners deserve more than "rule-of-thumb" or "seat-of-the-pants" operating concepts. A major profession should not trust to chance that the experience of previous or recent design periods is systematically passed down. Architects deserve tested laws showing performance of designs as several dimensions or factors are varied, information to throw light on how much difference it makes whether the design is handled this, that or some other way.

COMPARATIVE ANALYTIC STUDIES

Architects need to conduct research on how to analyze alternative design possibilities.

Design-researcher teamwork is called for, combining the inclination of the designer to provide new solutions and the interest of the scientist in comparative and experimental research. Some collaborative studies have been done abroad, notably in Sweden. Vernon De Mars, AIA, deliberately used different house-siting patterns in two halves of a resettlement project, hoping that someone would study the difference it made to people, but the research was never done.

Economic factors are also involved. The highway engineer manipulating cost and performance data for different thicknesses and mixes of concrete determines a specification that best balances low cost and high performance.

There is an important distinction between the researcher's experimental analysis, involving a few variables, and the architect's design-decision process involving dozens or hundreds of variables. The human mind, superbly capable of complexities and subtleties, serves as its own computer.

Potential Architectural Research

The ancient architectural criteria, Commodity, Firmness and Delight suggest equivalent major divisions of architectural practice theory: functional, structural and esthetic. The structural concept is of least concern to sociology or other social science.

The sociologist stresses the importance of the social environment as a factor intervening between the architectural-physical environment and the persons accommodated by it. Diagrammatically:

1 Physical environment created by the structure(s) and space(s)

▼▲ ▼▲

2 Social environment within which people live ➤ ◄ 3 Individuals who live in or become encompassed by these environments

For structure and materials, for instance, focus on (1) is sufficient. From a physio-psychological viewpoint we need analysis of the relations between (1) and (3).

The sociologist reminds architects and other researchers that there are important chain relations from (1) via (2) to (3) or from (3) influenced by (2) to (1).

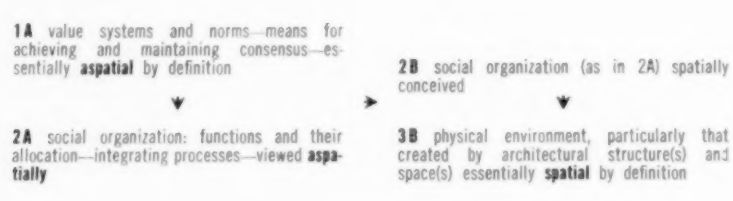
Social groupings encouraged by architectural spaces have their own kinds of impacts on the occupants. Reactions of persons to a building may be influenced by their background and by interaction with their equals or opinion-leaders.

SOCIAL ORGANIZATION OF OCCUPANT GROUPS

The research objective is the best possible understanding of group organization and function, pointing toward the best possible housing, space arrangement and quality.

In contrast to the architect's clinical task of diagnosis of each situation, the researcher's job is to identify classes or categories, to designate patterns, relationships or functions about which generalizations may be made and tested.

Diagrammatically, as a review setting for more specific research:


1A value systems and norms—means for achieving and maintaining consensus—essentially aspatial by definition
2A social organization: functions and their allocation—integrating processes—viewed aspatially
2B social organization (as in 2A) spatially conceived
3B physical environment, particularly that created by architectural structure(s) and space(s) essentially spatial by definition

A major chain of reasoning and interlocking propositions may be applied to any unit: family, business firm, manufacturing corporation, school, etc. Major sociological focus would be on 2A the objective, a sophisticated classification of *kinds* of units in terms of the architect's concern. We need research in method to equip the architect with the best analytic concepts and techniques.

Most important: a systematic study of fundamental relations between steps 1A to 2A, 2A to 2B and 2B to 3B.

1A to 2A relates values and functional organization alternatives and may reveal discrepancies between professed values and functional organization, part of the architect's problem.

2A to 2B is critical for architecture, the transition from aspatial to spatial, in which the architect should be strong in professional advice supported by tested principles. The objective: to determine effect of variation of space arrangement on the functioning of an organization.

2B to 3B is primarily architectural and less amenable to sociological study. Organization and architectural space are separate entities. Organization may change during life of a structure, which may impede growth and change. This is physical environment lag. Research objective: alternative ways by which structures may handle inevitable functional change—how well do loft-style large office buildings work over a long-time period?

SOCIAL FACTORS RELATED TO PERCEPTUAL AND/OR ESTHETIC REACTIONS

Research on perception is largely a concern of psychology, but should involve study of the effect of the social and cultural situation or climate on individual or group perception and attitudes.

We lack systematic studies of reaction of socially classified persons to specific kinds of architecture. What basis can be developed for forecasting public reaction to buildings? Architectural historians serving as critics attempt to interpret relations between style and social periods and forces, but we have no rigorous comparative empirical study of conditions of popularity of kinds of architecture.

Beyond knowing facts about people's reaction to architecture, the architect has further responsibilities on behalf of "the public interest." His practice theory must include a clear sense of his role as a member of an elite that is charged with providing structures of good taste.

SOCIOLOGY OF THE PROFESSION

The research spotlight should be directed at architecture as a profession to show the profession's subculture and traditional approaches to design process, external forces and the adaptability to changing needs, comparison with other professions.

The 1954 Survey Commission Report, *The Architect at Mid-Century*, marked a singularly notable effort at self-examination on the part of the profession. Continuing research is warranted to hold mirrors up to architects, to identify the assumptions that architects most readily take for granted and lose sight of because they seem so "natural."

A most important research subject is architectural education. There are important questions as to the roles assumed by graduates and others in the total area of functions and skills in addition to the key designer. ◄ *(to be continued)*

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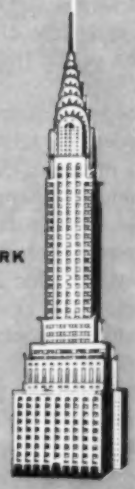

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CHARLES E. JONES, JR.

The newly elected President of the Association of Student Chapters, AIA, was born in Detroit and moved to Tucson, Arizona, in 1946. He is presently a third year student in the Department of Architecture at the University of Arizona. Charles was one of the organizers of the Student Chapter at the University, and served as Regional Director for the Western Mountain District. In this article he outlines the plans and objectives of the student organization.

► Since the first annual Student Forum was held at the Octagon in November of 1955, the Association of Student Chapters has made great strides forward toward the fulfillment of its aims and purposes. Much of the credit for this progress goes to the immediate Past President Paul Ricciuti and his associates.

Although we are still a young organization and are enduring many growing pains, I believe it is apparent by our actions that we are on the right path. During the short span of five years much of our time and effort has been spent in organizing and re-evaluating our Association. Now that the mechanics are almost complete and the organizational aspects are functioning properly, the students feel that they can pursue their aims more objectively. Since our beginning the ASC, AIA has had three main aims.

First, the desire for the general student body to become familiar with the purpose and organization of the Institute.

Perhaps the finest means of contact between the architectural student and the Institute is the annual Student Forum. Here, representatives of architectural schools have the opportunity to familiarize themselves with the operation and function of the parent body through first-hand inspection of its Headquarters. It is here that mutual interest between student and Institute can be formed, and it is hoped that ideas gained at these meetings will be taken by the delegates back to their respective schools.

I do not want to neglect, however, the importance and significance of the Annual Conventions. It is at these conventions that the driving forces of the AIA make their appearance—the collective efforts of all its members toward the advancement of architecture and its profession.

Secondly, to provide an environment for the exchange of ideas and thoughts among the students, schools, students from foreign countries and students of the allied arts.

Since we are now parallel with the Institute at both the national and regional level, we are given an opportunity to enact programs, of short duration, for discussions, lectures, seminars, exhibitions, tours, competitions, etc.

We must not overlook the value of the student publication. The aspects of having such a publication—whose high intellectual content would bring professional attention and respect—should not be underestimated.

Thirdly, it is also a goal to bring about a better understanding of architecture and the profession to the student and the general public.

A student chapter can be extremely instrumental in promoting architecture at the university level, not only to the student of architecture but also to the entire student body of both university and local secondary schools. Thus, the student is participating in a somewhat minor, yet pertinent, part in the restoration of the architect to his position in society today.

The writer hopes that he has not indicated that the success of the student program has been entirely due to student effort; quite the contrary. During the past five years the Institute directed much of its time, money and effort toward the development of this program. The recent appointment of Charles D. Belinky as Professional Relations Assistant in charge of student affairs is a further indication of the Institute's confidence in the Association.

Perhaps the best indication of the Institute's interest in the student organization is expressed in the words of its President, John Noble Richards, FAIA, in his address before the ASC, AIA at Grindstone Lake, Wisconsin: "If we accept the premise that America deserves a better architectural environment, and that architects must assert leadership to bring that environment about, and that the leadership can only be asserted collectively by the professional organization of architects —then we must also instill a positive and constructive attitude toward that professional organization in our recruits." ◄ CHAS. E. JONES

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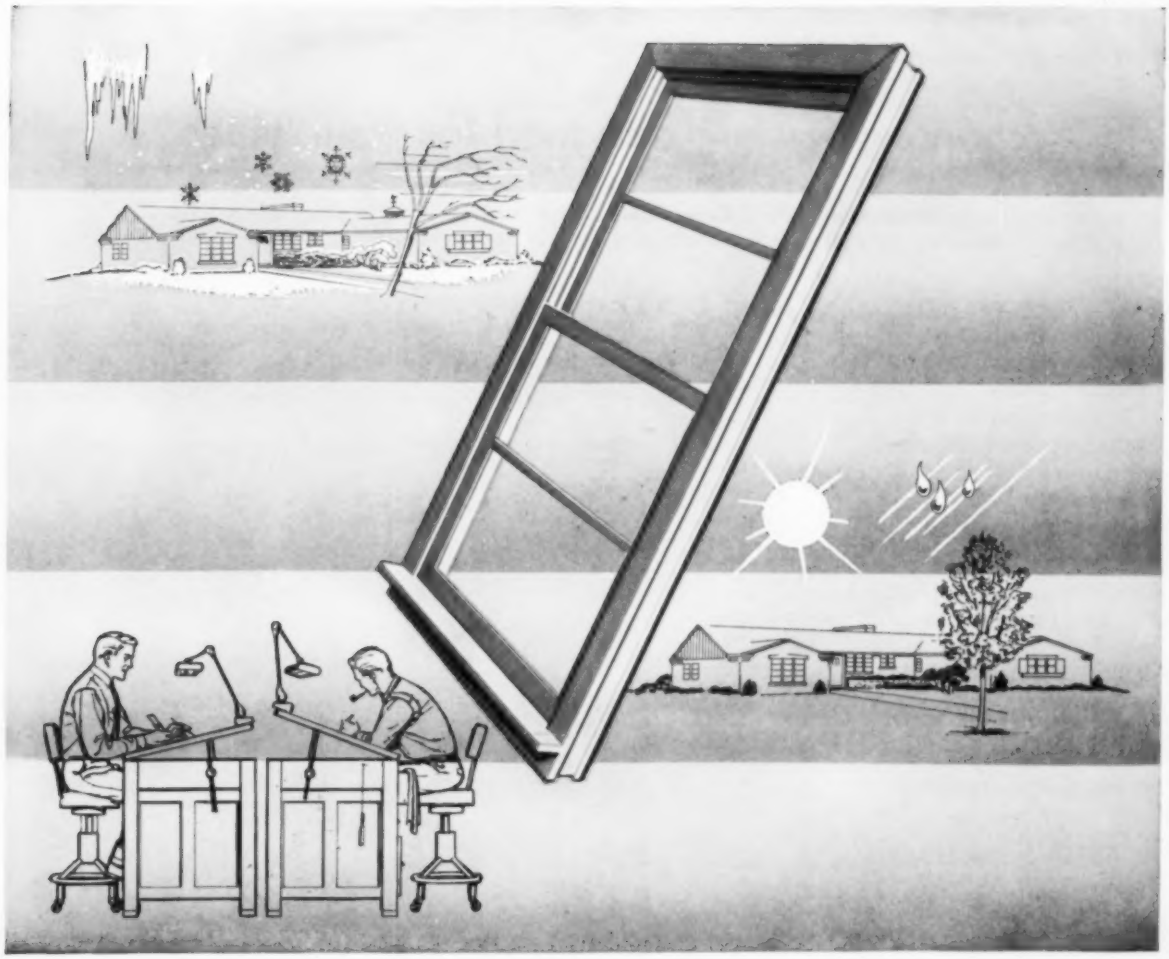

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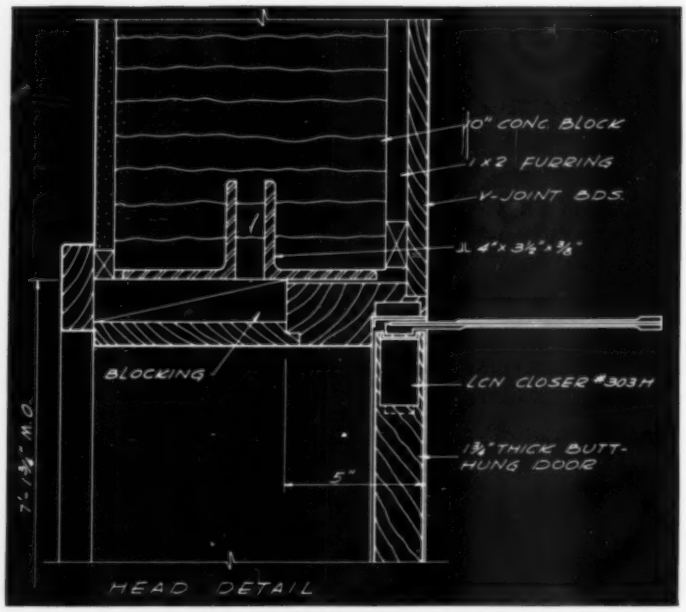

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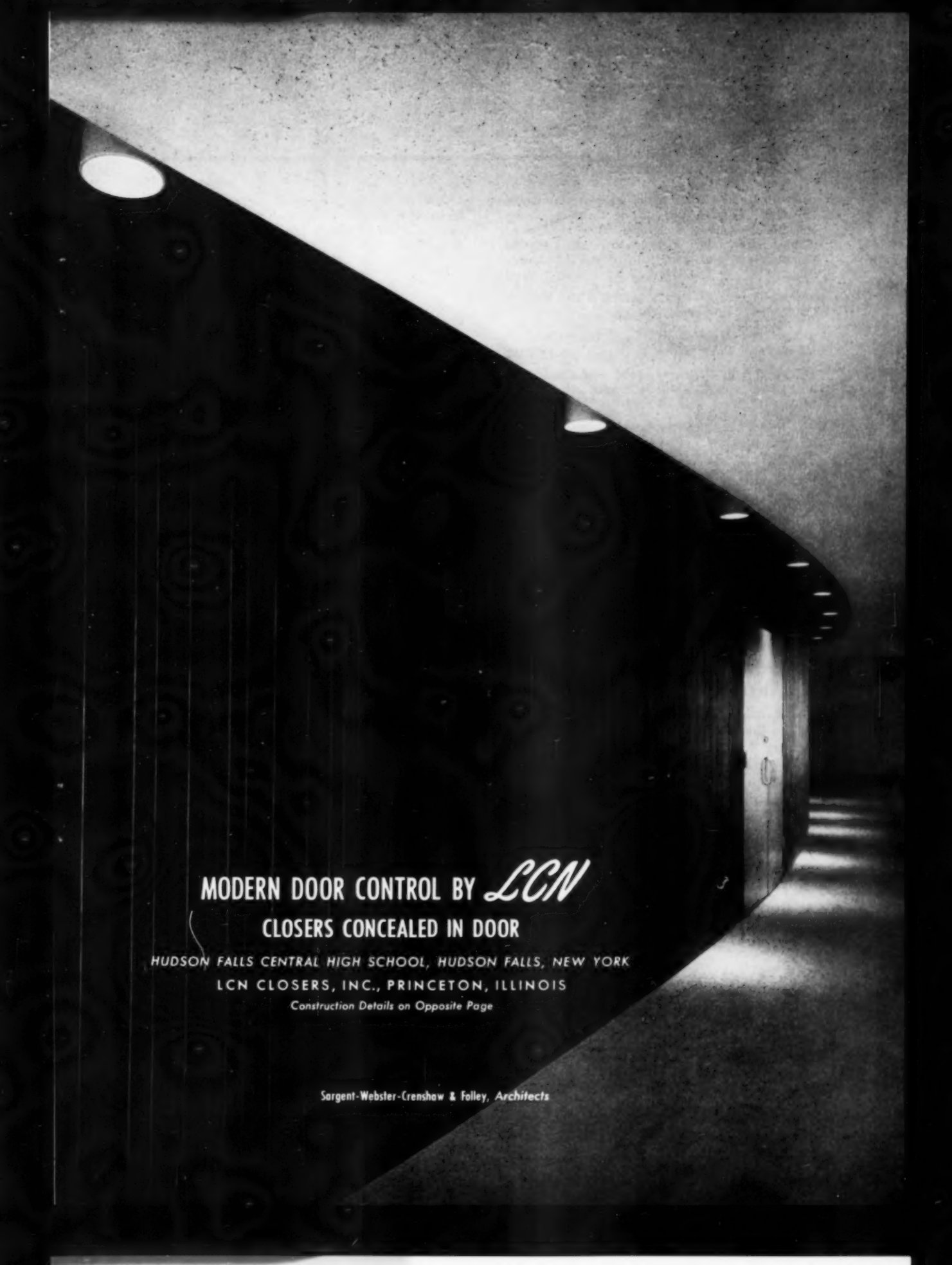

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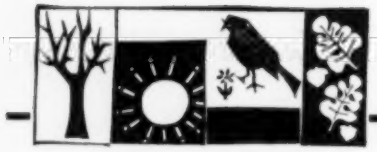


CALENDAR

September 21-25: International Congress of the International Council for Building Research Studies and Documentation, Rotterdam, Holland. For additional information contact: Secretariat of CIB, Bouwcentrum, Box 299, Rotterdam, The Netherlands.

September 22-23: North Central States Regional Conference, Milwaukee, Wisconsin.

September 22-27: Sixth Annual Assembly of the International Union of Architects, Lisbon, Portugal.

September 30-October 2: Producers' Council Annual Convention, Chase-Park Plaza Hotel, St. Louis, Mo.

October 2-3: New England Regional Meeting, Newport, R. I.

October 7-9: Central States Regional Conference, Des Moines, Iowa.

October 8-12: California Council Convention, Hawaiian Village Hotel, Honolulu, T.H.

October 8-10: New York State Association of Architects, Whiteface Inn, Lake Placid, New York.

October 8-10: Northwest Regional Conference, Spokane, Washington.

October 8-10: Western Mountain Regional Conference, Western Skies Motel, Albuquerque, N. M.

October 13: Fourth Annual Architects' Tour of Japan. For information contact Kenneth M. Nishimoto, AIA, at 263 South Los Robles Avenue, Pasadena, Calif.

October 14-16: Architects Society of Ohio, Sheraton Hotel, Akron, Ohio.

October 14-16: Texas Society of Architects Annual Convention, Austin, Texas.

October 20-30: Annual Convention, Architectural Institute of Japan, Kyoto and Osaka.

October 23-24: 14th Annual Meeting and Forum, Pennsylvania Society of Architects, Galen Hall Hotel, Wernersville, Pennsylvania.

November 1-7: Fifth annual convention of Prestressed Concrete Institute, Deauville Hotel, Miami Beach, Florida.

November 12-14: Florida Association of Architects, and Florida Regional Meeting, Jacksonville, Fla.

November 16-19: BRI Fall Conferences, Shoreham Hotel, Washington, D.C.

April 11-12: Inter-Society Color Council, 29th Annual Meeting, Philadelphia, Pa.

May 28-June 3: Twenty-fifth World Planning and Housing Conference, San Juan, Puerto Rico.

DISCIPLINARY ACTIONS

The following disciplinary actions were taken by the Board of Directors at its pre-Convention meeting, June 19-21, 1959.

Member	*Violation*	*Penalty*
Albert O. Larsen Minneapolis Chapter	Rules 8, 15	Termination
Clarence Cullimore, Jr Northern California	Rules 3, 8, 9, 12, 15	Termination
Jessee James Hamblin, Jr Connecticut	Rules 2, 9	2 Yr Suspension
Wilbur T. Harris New Mexico	Rule 12	Censure
Robert I. Wham New Mexico	Rule 12	Censure

Mandatory Rules

2 An Architect shall not render professional services without compensation.

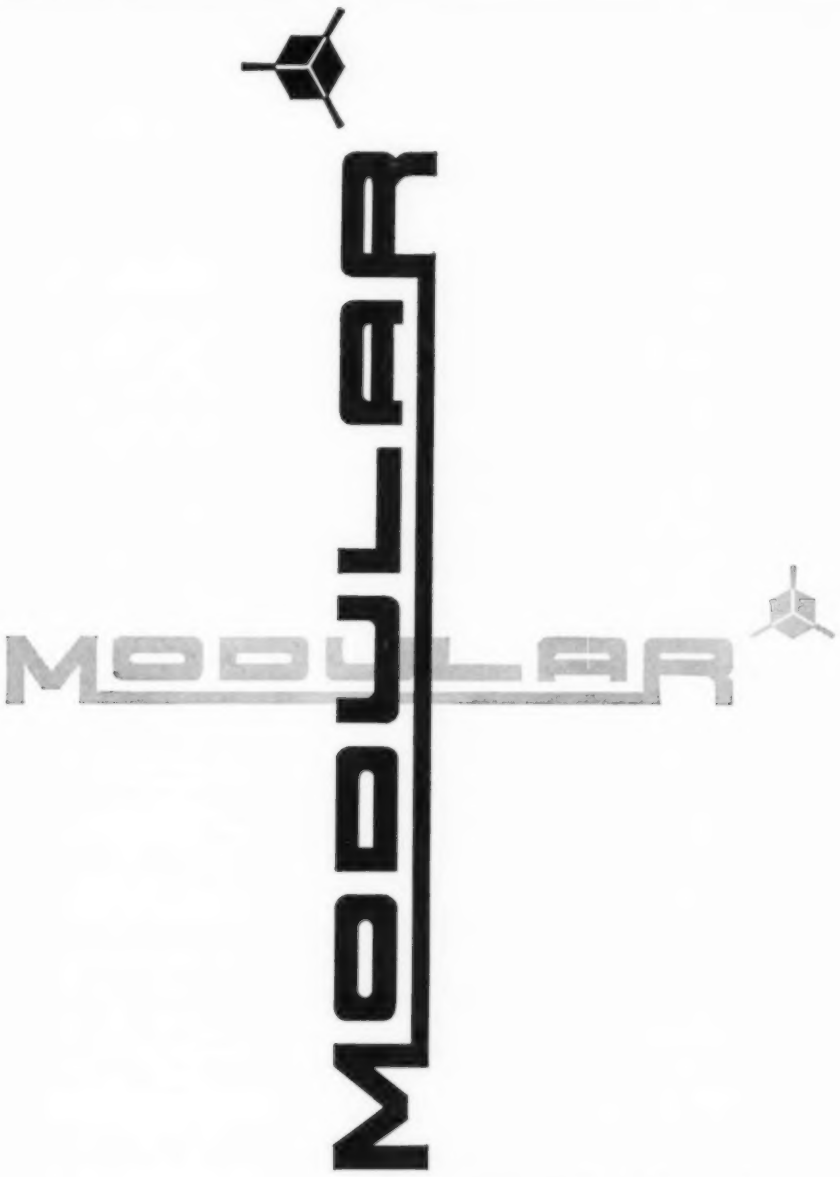
3 An Architect shall not knowingly compete with another Architect on a basis of professional charges, nor use donation as a device for obtaining competitive advantage.

8 An Architect shall not knowingly injure falsely or maliciously, the professional reputation, prospects or practice of another Architect.

9 An Architect shall not attempt to supplant another Architect after definite steps have been taken by a client toward the latter's employment.

12 An Architect shall not use paid advertising nor use self laudatory, exaggerated, or misleading publicity.

15 An Architect shall at no time act in a manner detrimental to the best interests of the profession.



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NFPA Standards & Codes

Following 1959 Editions of revised Standards and Codes are available from National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass. 4¾" x 7¼":

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NFPA No. **11**—Standard for Foam Extinguishing Systems. 66p, 60¢

NFPA No. **20**—Standard for the Installation of Centrifugal Fire Pumps. 72p, 75¢

NFPA No. **24**—Standard for Outside Protection. 47p, 50¢

NFPA Nos. **30, 30A, 30F**—Flammable Liquids Code. 62p, 60¢

NFPA No. **31**—Standard for the Installation of Oil Burning Equipment. 64p, 60¢

NFPA No. **54**—Standard for the Installation of Gas Appliances & Gas Piping (Supersedes Old Nos. 52 & 54). 110p, 50¢

NFPA No. **56**—Code for Use of Flammable Anesthetics (Safe Practice for Hospital Operating Rooms). 56p, 50¢

NFPA No. **58**—Standard for the Storage & Handling of Liquefied Petroleum Gases. 80p, 50¢

NFPA No. **60**—Code for the Installation & Operation of Pulverized-Fuel Systems. 32p, 50¢

NFPA No. **71**—Standard for the Installation, Maintenance & Use of Central Station Protective Signaling Systems for Watchman, Fire Alarm & Supervisory Service. 28p, 50¢

NFPA No. **72**—Standard for the Installation, Maintenance & Use of Proprietary Auxiliary, Remote Station & Local Protective Signaling Systems for Watchman, Fire Alarm & Supervisory Service. 42p, 50¢

NFPA No. **78**—Code for Protection Against Lightning. 48p, 50¢

NFPA No. **80**—Standard for the Installation of Fire Doors & Windows. 70p, 75¢

NFPA No. **96**—Standard for Ventilation of Restaurant Cooking Equipment. 8p, 25¢

NFPA No. **101**—Building Exits Code (16th Ed.) 256p, $1.50

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New paragraph on interior finish in industrial occupancies.

Revised to prohibit folding or sliding doors on required exits.

New paragraph to limit speed of revolving doors.

New paragraph to clarify protection of vertical openings not serving as required exits.

Revised to require smoke venting where openings pierce more than one floor.

NFPA No. **214**—Standard on Water-Cooling Towers. 11p, 40¢

NFPA No. **251**—Standard Methods of Fire Tests of Building Construction & Materials 18p, 50¢

NFPA No. **654**—Code for the Prevention of Dust Explosions in the Plastics Industry 20p, 50¢

NFPA No. **663**—Code for the Prevention of Dust Explosions in Woodworking Plants. 16p, 50¢

Other Pamphlets

American Standard Specifications for Glazed Ceramic Wall Tile, Ceramic Mosaic Tile, Quarry Tile and Pavers, Installed in Portland Cement Mortars.

Tile Council of America, Inc., 800 Second Ave., New York 17, NY, October 1958. 8½" x 11", 28pp

The latest in ceramic tile Specifications, superseding the Tile Handbook originally issued by the Tile Council in 1951. Does not include the installation of ceramic tile with adhesives or with the new dry-curing mortars, Specifications for which are now in process of revision.

Building Code Modernization — Steel Piles for Foundations of Buildings. Bulletin VII. Third Edition, April 1959.

American Iron and Steel Institute, 150 E. 42nd St., New York 17, NY, 6" x 9", 23p

One of a series of Reference Bulletins, this new edition takes cognizance of advances made in foundation practices and design, the better understanding of soil mechanics and the increased emphasis today on the effective and economical use of structural materials.

Standards for Safety—Fire Tests of Building Construction & Materials. UL 263, Seventh Edition, May 1959 (Supersedes January 1955 Edition).

Underwriters' Laboratories, Inc., 207 E. Ohio St., Chicago 11, Illinois. 5" x 9", 22pp

These methods of fire tests are applicable to assemblies of masonry units & to composite assemblies of structural materials, including bearing & other walls & partitions, columns, girders, beams, slabs & composite slab & beam assemblies for floors & roofs. They are also applicable to other assemblies & structural units that constitute permanent integral parts of a finished building.

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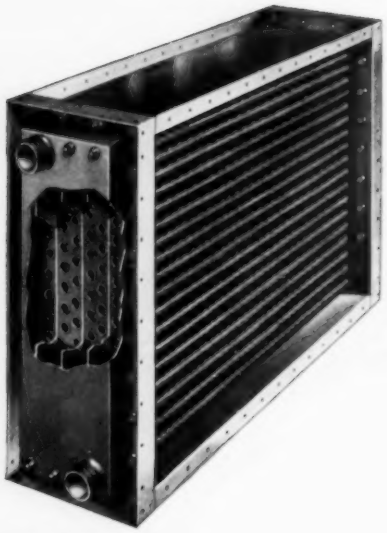

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